

These inclines must have considerable pitch so that the tacks cannot stop on the way and become glued to the trough.

This is the grand secret of tinning tacks. The acid cleans them and the salammoniac acts as a flux. All the tin that rattles off in the form of scales can be saved and remelted. The sale value of tacks tinned is increased about five cents a pound, and the cost is about two cents.

#### USES OF NUISANCES.

Few people can look with pleasure, or even complacency, on the reptile tribe, but they have their uses. The snail is a *bon bouche* to the French and others, and frogs or "water chickens" we know by trial to be delicious. The inhabitants of Central America delight in the flesh of the huge lizard, iguanodon, and even the musky flesh of the alligator is not obnoxious to them.

Years ago we knew of a lady, refined and cultivated, who eat with gusto the crawling bugs found under stones in moist places, called by the country people "sow-bugs," and declared they had a delightful acid taste. The French saying, *chacon a son gout*, is perfectly right. Every one to his taste. What is poison to one is nourishment to another; and we find in one of our exchanges a statement that the common angle worm when fed for a few weeks upon sugar is said to furnish a very delicate and delicious jelly, which is peculiarly acceptable to the stomachs of dyspeptics and consumptives.

We have no doubt of the truth of this statement. We have known this reptile used as a material for soup as well as for a poultice, applied outwardly and inwardly with apparently good results in certain cases of disease. Whether the cure was the consequence of the prescription, we are not physician enough to say, but that a cure did follow from this almost inhuman treatment, we know.

In fact, we have no better reason for rejecting the lowest of God's creatures as a means of our advantage, whether in health or sickness, than we have for denying our appetites the gratification of animal food altogether. At first sight the use of the reptile and insect tribe is unpleasant, but when we consider that from the earliest times whole tribes and nations have considered them legitimate articles of food or means of cure, we pretend to a nicety of taste not supported either by the practice of others of our race or by the Word of God if we reject them.

As we understand the purpose of the Creator, nothing was created in vain, and possibly while we have been trying to curb the elements, we have forgotten that the lowest orders of animal life may be made to minister to our wants and our necessities, if not to our love of change.

#### "Haloxylin"—New Blasting Powder.

The vast importance to the miner of a thoroughly good blasting powder, causes considerable interest to attach to all inventions relating to the manufacture of that article, especially when additional advantages are obtained without a corresponding increase in the cost of production. For some time past a new blasting compound—the novelty of which, however, consists rather in the mode of manipulating the materials than in the materials themselves—has been extensively used in the mines and quarries of the Austrian empire, under the name of haloxylin, which appears to have given great satisfaction, both from the quantity of work done and the manner of doing it. It is one of those powders which has the property of merely burning away when in the open air, and yet exerting a great rending force when properly confined in the blast hole; while it is not liable to ignite spontaneously, and cannot be exploded by percussion or friction. The smoke resulting from the explosion is less in volume than usual, and, in addition to this, it is free from the usual suffocating character of powder smoke; in fact, there is nothing in the residue injurious to health, or even disagreeable, so that operations can be carried on without intermission. A pound of haloxylin will occupy nearly twice the space of 1 lb. of gunpowder; and as it does fully two-thirds the amount of work, bulk for bulk, as any powder now in use, it follows that a material saving of cost is effected.

The invention of this powder is due to Messrs. Wilhelm and Ernst Fehleisen, of Styria; it consists of sawdust, charcoal, saltpeter, and usually, ferrocyanide of potassium, although the latter ingredient is sometimes dispensed with. The proportions in which they are combined are generally 9 parts by weight of sawdust, 3 to 5 parts of charcoal, 45 parts of saltpeter, and 1 part of ferrocyanide of potassium. The sawdust, which if not from a non-resinous wood should have the resin extracted from it, is passed through a fine sieve, and then mixed with finely powdered charcoal (from light woods) and powdered saltpeter. The mass is moistened with about a quart of water to the hundredweight, and then stamped or crushed. By this means the whole is rendered homogeneous. The mass is now moistened again with water under ordinary circumstances, and with a weak solution of ferrocyanide of potassium when a quick powder is required. The subsequent processes of caking, granulating, and drying are conducted in the same way as is usual in the manufacture of ordinary powder, and the grains can, if desired, be polished as usual, but this is found to be unnecessary.

Owing to the great cost of carrying explosive materials, the importation of haloxylin from Germany is, commercially, out of the question; it is, therefore, proposed to manufacture it in this country. There are at present three factories in Styria, Hungary, and Moravia respectively, yet they are scarcely able to keep pace with the continually increasing demand, and it is to this circumstance alone that is to be attributed the fact that until now, no efforts have been made to introduce it into England. The Hunyad board of the Kron-

stadt Mining and Smelting Company made careful comparative experiments in their Telek iron mines, and obtained with half the weight of haloxylin the same results as with the powder in ordinary use; but such a high duty as this probably resulted from some exceptional circumstances not having been taken into account; that 2 lbs. of haloxylin, however, will do as much as 3 lbs. of other blasting powder appears to have been well ascertained. The Austrian State Railway Company certify, as the result of the experiments made at their mines in the Banat, that the trials in the coal mines of Doman, took place in a cross course when very dense vapors prevailed; nevertheless, the place could be approached immediately after blasting, no smoke being left. As to the effect, 2 to 2½ ozs. of haloxylin are equal to 3 to 3½ ozs. of blasting powder. The result of the experiment with this substance showed that a firmer inclosing wall was required than with powder; the effect upon the rock was more cleaving than crushing, and on account of this property it promises considerable advantages over powder for the blasting of coal. In the ironstone mines of Morawieza the experiment was made in less firm rock, with large bores, and a charge of 25 to 30 lbs. of haloxylin produced an effect exceeding by one-third that of gunpowder. Such evidence as this is sufficient to prove that the non-explosive has, at least, some advantage over ordinary blasting powder; and when the quantity of blasting powder annually used in Great Britain is taken into consideration, it will be readily understood that, assuming even the smaller estimate 30 per cent of saving, the inducement for the miners of this country to adopt it will be ample to insure, under any circumstances, a fair remuneration to those undertaking the manufacture.—*London Mining Journal.*

#### English Artisans at the French Exhibition.

On Whit-Monday, as we learn from the *London Times*, the first batch of English artisans, about one hundred and fifty, went to see the French Exhibition. A little encampment of huts has been built close to the most frequented entrance of the Champ de Mars—namely the Porte Rapp—for the working classes, the huts are clean and comfortable. Some contain two beds and some four. More than one hundred of these beds have been engaged for the use of English artisans during the next five months; and during the present holidays a still larger number have been engaged. It is calculated that the trip to Paris will cost the British workmen about fifteen dollars, and for this sum he can stay there a week. The cost of transit to and fro absorbs half the money. There are kitchens all over Paris which provide the workman with a cheap dinner, wonderfully good; and at the Omnibus Buffet, in the Champ de Mars, he can fare well at a very moderate charge. All the food in Paris is rigidly inspected. There are people there whose business it is to examine even the eggs that come into the market; so that the artisan can have no fear that he will have carrion or horseflesh or anything false offered to him. This omnibus restaurant is an immense place, with accommodations for fifteen hundred people to dine all at once. "The food is really good, and I doubt not says the *Times* correspondent, that the British workmen will enjoy the change and think it glorious. The only thing bad about the dinner is the cheap wine. The beer is very good, as they have not yet learned the art of adulterating it; but the British workman does not see the use of coming to Paris, if he is to drink beer."

#### Native India Muslins.

Whatever relates to textile fabrics, especially those of cotton, cannot fail to interest American manufacturers. In our growing familiarity with the marvellous amount and delicacy of the products of power looms and other machinery worked by steam, we are in danger of forgetting what is daily accomplished by means of hand looms and the workings of the simple and sensitive fingers. To this day India cotton goods, especially the Dacca muslins, or those from Eastern Bengal, have been imported into England, recommended by their superior softness, richness and durability. So, also, of the calicoes, chintzes, and ginghams, which form the staple manufactures of Coromandel. Though nearly driven out of the European market by cheap and successful imitations, they are still preferred in the East, where the curious believe themselves able to distinguish by the touch and even by the smell these genuine products of the Indian loom. The highest qualities of the Dacca muslins are splendid examples of the superiority of intelligent labor over the most elaborate machinery. The hand of the Hindoo, to use the language of a writer in *Once a Week*, "is educated to a delicacy of touch that is marvellous, and that delicacy is transmitted through succeeding generations until the native manipulator acquires a kind of instinctive aptness, which gives him all the unerring regularity of a machine, directed by the intelligence of man." The native women spin with the finger a yarn which surpasses in fineness the machine-spun yarn paraded, in the great Exhibition of 1862, as a marvel of European skill. The classes of muslin called "woven air" and "evening dew" are, as their names would import, of surpassing fineness of fabric. It is related that a weaver was chastised and driven out of the city of Dacca for neglecting to prevent his cow from eating up a piece of this quality of muslin which he had spread out and left upon the grass, the article being so fine that the animal could not see it on the herbage. So delicate is the manufacture of the shirt staple of the Dacca cotton that it can only be spun into yarn at certain times of the day. Preference is given to the morning, before the dew has left the grass; or, if spinning be carried on after that time, it is over a pan of water, the evaporation from which yields moisture enough to prevent the fiber from becoming too brittle to handle. The Dacca muslin, with all its delicacy, will wash,

while European muslin will not. A piece of "evening dew," one yard wide and four yards long, weighs only one ounce and eighty-six grains.

Figured muslin is a still more costly and delicate work of the Indian loom. No approach has been made by Europeans in producing the charming effect of weaving gold and silver threads into the different fabrics made in India. The embroidery in the woven garments, in which the absolutely pure gold is employed, never tarnishes, and it washes just as well as the other threads of the garment.

What will our American manufacturers, who may look to competing at some future day with the English in supplying the Indian market, say to the following statement made by the writer whom we have quoted above: "A native with a rude bamboo loom will, with his fingers and toes, finish a piece of muslin which cannot by all the application of our most delicate machinery be produced in Europe." A like superiority is evinced in the Hindoo's almost instinctive appreciation of appropriate form and color in design. He has learned to print fast colors. The native fabrics are remarkable for the sobriety and harmony of hue which they present. The English colors will not wash, and even Prussia is gaining the advance in supplying dyed goods to India.—*Philadelphia Ledger.*

#### Product of a Fleece of Wool.

The product in thread or cloth from a fleece of wool is something astonishing. At Norwich, many years since, 39,200 yards, or twenty-two and a quarter miles of thread, were spun from a single pound of wool; and 60 years ago a Miss Ives, at Spaulding, spun 68,000 yards or about 95½ miles of woolen thread from a pound of wool, off a Lincoln ewe. But this seems nothing to the multiplication a fleece now undergoes at Bradford. From the manufacturer who generally buys by "clip," I obtained this bit of information. A 20 pound Lincoln fleece, used as an admixture with cotton in the finest Alpaca fabrics, suffices for upward of twelve "pieces," each piece of 42 yards in length; it might probably be extended to 16 pieces, or a total length of 672 yards, three feet in breadth. At 3s a yard, the sum realized would be £100; and I suppose (though I am not much of a dressmaker), that the crinolines of 80 or 90 ladies were covered with a single fleece of wool.—*J. A. Clark, Long Sutton, Eng.*

#### Rose Crop.

Mr. Blunt, the British Vice-Consul at Adrianople, in his report to the Foreign Office this year, gives an account of the rose fields of the neighborhood of Adrianople, extending over 12,000 or 14,000 acres, and supplying by far the most important source of wealth in the district. The season for picking the roses is from the latter part of April to the early part of June; and at sunrise the plains look like a vast garden full of life and fragrance, with hundreds of Bulgarian boys and girls gathering the flowers into baskets and sacks, the air impregnated with the delicious scent, and the scene enlivened by songs, dancing, and music. It is estimated that the rose districts of Adrianople produced in the season of 1865 about 700,000 miscals of attar of roses (the miscal being 1½ drachms) the price averaging rather more than 3s. per miscal. If the weather is cool in spring, and there are copious falls of dew and occasional showers, the crops prosper, and an abundant yield of oil is secured. The season in 1866 was so favorable that eight oaks of petals (less than 23 lbs.), and in some cases seven oaks, yielded a miscal of oil. If the weather is very hot and dry, it takes double that quantity of petals. The culture of the rose does not entail much trouble or expense. Land is cheap and moderately taxed. In a favorable season a donum (40 paces square) well cultivated, will produce 1,000 oaks of petals, or 100 miscals of oil valued at 1,500 piasters; the expenses would be about 540 piasters—management of the land 55; tithe, 150; picking 75; extraction, 260—leaving a net profit of 960 piasters, or about £8,11s. An average crop generally gives about 5 per donum clear of all expenses. The oil is extracted from the petals by the ordinary process of distillation. The attar is bought up for foreign markets, to which it passes through Constantinople and Smyrna, where it is generally dispatched to undergo the process of adulteration with sandal-wood and other oils. It is said that in London, the Adrianople attar finds a readier sale when it is adulterated than when it is genuine.

#### A Strange Telegraphic Freak.

A few weeks ago a couple of wires on the New York Central Railroad began to act very unreasonably. At ten o'clock in the morning they would "strike work," and resume at four in the afternoon. A careful examination of the line produced no result. The superintendent himself looked into the matter and saw nothing. It was a complete puzzle. An old Albany operator, however, was more successful. About sixty miles west of that city he found a point where the wires passed over the roof of a building, almost touching it. As the sun rose, the wires fell, and at twelve o'clock they lay snugly together on the tin roof. As the sun fell, they cooled and rose, and by four o'clock they were in their proper positions. Of course the trouble was rectified.

A PATENT has recently been taken in England for introducing into the liquid metal in the puddling or other furnace used for converting cast iron or steel, the vapor of nitric acid or chloric acid rich in oxygen, or their salts, and also the vapor of hydro-acids or other materials rich in hydrogen, or the salts of hydro-acids, or mixtures of the said acid vapor, either alone or combined with a blast of air; or liquid hydro-carbon in a state of vapor may be introduced into the liquid metal. By the introduction of the oxidizing gaseous liquid or solid compound the decarbonization of the iron and the oxidation of siliceous matters in the iron are promoted. When hydro-acids or materials rich in hydrogen, or the salts of hydro-acids, are passed through the melted metal, they are decomposed, and at the moment of decomposition, or when the elements are in a nascent state, they act upon the metal and improve its quality. The quantity of acid or salt employed will depend upon the composition of the iron acted upon.