

AN ODD MILL

Operated by the Geological Survey at Washington.

Chiefly Devoted to Sawing up Petrified Logs.

There are many novelties in the government departments at Washington, and especially in the scientific bureaus. The most novel that has yet been discovered is a petrified lumber mill operated by the Geological Survey. It is an institution that has not many visitors, its location down in the basement of the survey building on F street being rather out of the track of the regulation sightseer, but there the survey lapidaries grind thin sections of rocks and minerals of all sorts for microscopic examination, and there is a band saw, the invention of the survey, that will cut anything from hot butter to a quartz crystal.

Lately the scientists have been sawing up a lot of vegetable petrifications from Idaho. They can carve up anything in the shape of petrified logs than they can get in front of their sawing machine. Even the ossified man of the dim museum would not be safe from them, and, indeed, lately they were called on to cut up a petrified woman, one that was on exhibition in Washington. After they had bored into one of the damsel's lower limbs a little way they struck a gas pipe. The petrified woman was made out of Portland cement, and the scientists gave her up as a hard case, which, in fact, she was.

But the most interesting case that has come to the petrified lumber mill lately was known as a cycad, a sort of vegetable parasite which flourished in the prehistoric forests of the country some million of years ago.

It looked very much like a cocoon with the husk on and was cut up almost as easily as though it had never been petrified.

The band saw used in the work is nothing more than an endless steel wire between an eighth and a seven-teenths of an inch thick running at a very high rate of speed over two good-sized fly-wheels, declares an exchange. Water and emery are fed on the wire as it runs, and the saw comes as near being an irresistible force as anything known in the cutting line. Since the invention of the wire saw in the survey, it has been copied by a number of laboratories and lapidary establishments all over the country.

Besides the saw there are a number of grinding machines, smooth iron plates revolving like grindstones, flat side up and flooded with water and emery. On these plates sections of stones for microscopic examinations can be ground a thousandth of an inch or less in thickness, so as to be perfectly translucent under strong light.

The lapidary establishment is one of the most essential aids that the Geological Survey has in working up the geology of the country. Many of the rocks that are met with in the fields cannot be distinguished from each other, except by laboratory examination, and as the nature of the rocks filling the different sections of the country has to be ascertained in working up its geological history, the specimens, carefully labelled, have to be sent back to the department in Washington for study and classification.

The Crow Was Lured.

Dick Willoughby relates an amusing incident that happened to him at Funder Bay.

Dick was driving a tunnel on a ledge back of his cabin, and was in the habit of leaving a stick of giant powder on a rock in a sunny place at the mouth of the tunnel to thaw out. On several occasions when he went to get his powder it had mysteriously disappeared, and he was at a loss to account for it. As it was considerable of an annoyance to have to go to the cabin and get more powder and wait for it to thaw, Dick concluded to watch proceedings and wait for the thief.

He laid the stick of powder in its usual place, and had waited but a short time when he saw a raven sail out of a tree and swoop down upon the explosive. The bird tore at the tough paper cover until it could get at the powder, then began to greedily devour it. Giant powder is made up of nitro-glycerine, sawdust, and grease, and a whole stick of it makes a very hearty breakfast for a raven. The stick had nearly disappeared when Dick thought it time to avenge his loss, and was in the act of raising his rifle, when the raven gave a defiant caw and arose in the air with the remainder of the stick of powder grasped in its claws. When up some dis-

tance the powder slipped from the bird's grasp and came tumbling to the ground. Dick saw the powder drop and dodged behind a boulder, fearing it would explode when it struck the rocks; however, it did not. The raven perched in a tree, and Dick drew a bead and let drive. Immediately following the report of the gun Dick was not a little startled at receiving quite a shock and hearing a second and louder report, while the air was filled with small bits of raven meat and feathers.

After the smoke of battle had cleared away, all that Dick could find of that raven was the bill and claws and a bunch of black feathers. The shock of the bullet passing through the bird's body had exploded the powder it had devoured.—Juneau (Alaska) News.

Counting Coins by Machinery.

The feat of counting 2,000 silver dollars per minute is now being performed at the Mint by a little machine invented by Sebastian Heins, the chief carpenter of the institution, and by its aid the work of counting the coin and weighing the silver bars, can it is thought, be completed by the middle of next month. The slow progress made in counting by hand led Mr. Heins to experiment, with the result, after the expenditure of much thought and time, of turning out a very successful machine.

Mr. Morgan of Mint Director Preston's office was greatly interested in the experiments, and, upon witnessing the final successful test of the invention, he granted permission for its use in counting the great mass of silver dollars. The machine was put into regular operation yesterday, and when worked to its limit was easily able to dispose of two bags of coins containing \$5,000 in a minute.

The machine consists of a hopper, into which the coins are dropped. A cog wheel, the teeth of which resemble those of a circular saw, carries the coins to tubes, and from there they are forced out upon a little table, containing twenty grooves, each of which contains just fifty coins. A turn of the crank counts 1,000 coins which are immediately put into a bag, and a second thousand follows before the expiration of a minute.—Philadelphia Record.

Found a Rattlesnake in a Catfish.

Not long since Theo. Armstrong and some of his neighbors were fishing in Little River, some ten or twelve miles below here, where they saw a large catfish on the opposite side of the river floating near the surface of the water. Its queer actions attracted attention—it seemed to be in pain and vainly trying to go under the water. Mr. Armstrong pulled off his clothes, swam across, caught the fish and brought it to the shore. The fish appeared to be very much swollen, or at least very full of something. He cut it open and was astonished to find a large rattlesnake in its stomach. The snake was not digested, in fact, was just beginning to swell, and this swelling is what is supposed to have caused the fish's trouble. It was getting so full of gas it could not sink. Mr. Armstrong stretched the snake out and measured it. It was three feet long. The snake's head had been beaten and its rattles were gone, which led him to believe that some one had killed it, taken off its rattles and thrown it into the river, where it was swallowed by the fish.—Galveston News.

An Absent-Minded Man.

The following anecdote of an absent-minded man has lately come to hand, and while some of you may have heard it before it seems to be too good to be passed over entirely.

Among the personal anecdotes told of Peter Burrows, the celebrated barrister, and one of Ireland's "worthies," is the following remarkable instance of absence of mind: A friend called upon him one morning in his dressing-room, and found him shaving with his face to the wall. He asked him why he chose so strange an attitude. The answer was, "To look in the glass."

"Why," said his friend, "there is no glass there!"

"Bless me!" Burrows observed, "I did not notice that before."

Ring the bell, he called his servant, and questioned him respecting his looking-glass.

"Oh, sir," said the servant, "the mistress had it removed six weeks ago."—Harper's Young People.

Soft as Wax.

He—I wonder why that stunning looking girl gazes at me so yearningly. She must be endeavoring to make an impression.

She—Very probably, as people usually use something soft for that purpose.—Truth.

FOR FARM AND GARDEN.

THE LONGEVITY OF THE HORSE.

The longevity of the horse depends almost entirely on the intelligent care and feeding given to him. If he has to tax his reserve stock of vitality to do extra work, or because of insufficient feed, his life is shortened just so much. Overwork tells rapidly and is both costly and cruel. Horses can be made more valuable by a little care in teaching them. Put on a moderate load and try giving a few lessons.—American Farmer.

CULTIVATING MELONS AND CUCUMBERS.

To prepare the grounds for melons and cucumbers, have it finely broken and well enriched. Have hills about five feet apart each way and plant three or four seeds in each. If the runners are pinched back at the third joint, and if the lateral runners are checked in the same way, the vines will be more fruitful. Two or three plants should be left in each hill. To keep insects away, dust with tobacco dust.—American Farmer.

WIRE CHICKEN YARD.

A very good chicken yard is made of wire fencing. The yard can be made in sections, so that the different broods can be kept separately. In such cases a fine mesh should be used, not over one inch at the bottom, so that there cannot be intercommunication. The top of the yard can be covered so as to keep out hawks and other enemies, and rats can also be kept away by the same means. Small poultry coops are constructed of this material, and in dog kennels, rabbit patches, pigeon houses, dove coots and aviaries, the use of wire is unlimited. It is cheap, durable, will not blow down, admits plenty of light and air, is neat and ornamental, and the material does not obstruct a view of the interior. A good hen's nest is made of the same material, the advantage being that it is cleanly, avoiding dirt and vermin.—Hardware.

PLANT FOOD.

The Missouri experiment station, in its bulletin on soils and fertilizers, summarizes as follows:

1. All crops demand soluble plant food in proper amounts.
2. The plant food most deficient in our soils is potash, phosphoric acid and nitrogen.
3. All plants readily respond to applications of potash and phosphoric acid, and all but the leguminous plants to that of nitrogen.
4. The leguminous plants are able to gather and appropriate nitrogen in abundance from the atmospheric air.
5. Large crops mean the buying of potash and soluble phosphoric acid fertilizers, and unless a proper rotation is adopted, that of nitrates or other nitrogenous manures.
6. Potash salts may be applied either in fall or in spring; soluble phosphoric acids and nitrates in spring only.
7. For deep-rooting plants the two former should be plowed under, and the soil receive a top dressing in addition.
8. Beneficial results follow the application of lime, and that of indirect fertilizers, such as salt.
9. A proper rotation, differing under different conditions, may be looked upon as the vital measure for making farming a profitable and satisfactory occupation.

GATHERING BUTTER.

Oftentimes both the farmer's wife and professional dairymen experience considerable trouble in gathering the butter into a solid mass, even after it appears in the churn in small granules and floats about in the buttermilk. The usual plan is to manipulate with the dash until the butter can be removed from the churn in a more or less compact form. Thus treated, it too often presents a greasy appearance, and by the time the usual washing and the proper quantity of salt is well worked in, the granules are mostly broken, and the result is that the output is marketed at a low price. Very much of this trouble can be avoided by a simple process, easily understood, and within the reach of all. As soon as the butter appears and the process of gathering is about to take place, then, for an eight pound churning, pour gradually over the floating butter in the churn two gallons of cold water, in which a teaspoon of fine salt has just been dissolved. Let it stand for a moment, then manipulate with the dash as in the usual manner in completing the churning, and the chances are the butter will be well gathered but in unbroken granules. The reason is that the water containing the salt increases the density or specific gravity of the buttermilk, causing the granules to

rise to the surface. It also hardens them, removing a certain substance or coating from their surface, allowing them to readily unite under pressure such as is obtained by the use of the dash or revolving churn. Butter gathered by this process is much firmer, better granulated, and consequently better flavored. The only objection to be offered is the addition of salt to the buttermilk; but for feeding purposes, if added to the swill or house slops, no ill effects to the swine are ever observed. When fed to hogs at clover pasture, the action of salt removes all danger from blout by simply increasing their desire for drink.—American Agriculturist.

SHEEP BREEDING.

The flockmaster should settle on the type of sheep that suits his fancy, and at once aim to produce it, and with proper care the result will be as has been in England; and whether this fancy be for a long or short wool, a white or black face, I would repeat what has been so often said—to keep some one particular breed year after year, always selecting the best to breed from—and the result will be practically a pure-bred stock, notwithstanding the "whims" of those who talk about trouble after the first cross and a flock running out if kept on the same farm too long. These are theories that have long been exploded, said John Jackson at a sheep breeders' convention.

If it would not pay us to fold our sheep on grass in our hot summer weather, it would pay to put more on our pasture, and supplement the pasture by sowing vetches, which are a most excellent food for sheep. This could be fed off by folding the sheep on the land, cutting and feeding in racks the same as in England—by putting them on in the evening, allowing them to remain till morning, then to run in some shady place with a supply of water for the rest of the day. A separate fold with a "lamb creep" would be a good way to push the lambs forward for the butcher of the show ring.

These vetches, if sown early, would be ready to cut about the first of July, a time when pasturage is dry and scarce, and if well manured this land would make a good preparation for wheat, or for turnips or rape, to be again fed off in the fall. By sowing the vetches at different times, as they do in England, they will approach a good crop of corn. It is also a most excellent food for sheep and lambs, especially when run through a cutting-box. It is very easily cut, even with a hand box, and when quite green enough can be taken in at a time to last a week by standing it on end to keep it from heating. But it must all be cut before frost, and be allowed to partially cure, and then be put inside out; will make the best feed for sheep right up till winter sets in.

Again, if we cannot feed our roots on the land as they do in England in the winter season, we can grow them (and should grow more of them) and feed them inside, where I believe they will do the sheep more good than if fed on the land, as they are in England, for even there they are often more or less frozen, at other times in mud up to the knees. Another thing I have noticed when travelling through England, that is a temporary building at the corner of two or more fields for shade and shelter. This, in many cases, would pay in this country. Then there is the dipping to destroy ticks. This is regularly attended to in England, and it would pay every owner of sheep in this country to follow their example.—New York World.

FARM AND GARDEN NOTES.

A good way to choke a valuable cow is to feed her uncut vegetables.

No dead or dying limbs should be permitted to remain on the fruit trees.

In pasture where there are no trees a few posts should be set to furnish rubbing places for stock. They would not be as liable to injure the fences by rubbing.

There is no fodder crop in the world that will produce so much with as little expense as corn. It is easily cultivated, and will keep more stock to the acre than anything else.

The farmer who centres his hopes in grass and cattle will have a much more even and satisfactory course before him than the one who depends mainly on grain. For one thing, he does not find it so difficult to keep his land up.

It is said that the best way to test cabbage seed is to drop some on a hot stove. If the seeds burst and pop (like popcorn) they may be considered of good quality, and those in the package will germinate and produce good plants.

FOR THE HOUSEWIFE.

COOKING ASPARAGUS.

A hint that may be useful to cooks, who are often disconcerted at finding the heads of asparagus tender, while the stalks are hard, is as follows: The hardness of the stalks arises from the fact that the asparagus, being horizontal, the green part, which requires much less cooking, gets done before the stalks. To obviate this a little wire basket can be got for a few pence, the orifice of which is large enough to admit of the asparagus standing perpendicularly. The water in it only reaching to the top of the stalks, does not touch the heads, which are cooked in the steam.

COOKED CUCUMBERS.

Cucumbers are seldom used except raw, and yet they are both delicious and digestible when cooked. The peel should be removed and the cucumbers should be boiled until tender, then drained and sliced, and simmered in good brown gravy, to which a very little Chile vinegar has been added, for seven or eight minutes. Radishes, like cucumbers, can be served hot as well as in salads. They should be tied in bunches and boiled for eight-teen or twenty minutes, then placed on toast and covered with white sauce. Peas, French beans, and sprouts are greatly improved by being tossed for a few minutes previous to sending to table in a saucepan containing a lump of fresh butter, a teaspoonful of cream, a pinch of castor sugar, and seasoning of pepper and salt. A rather more simple way of treating fresh beans is a la Francaise; they are put into a pan with a piece of butter, the juice of half a lemon and a little pepper and salt.

DELICIOUS CREAM PIE.

Beat three eggs very light with an eggbeater, add to them one cup full and a half of powdered sugar, and beat with a spoon until the mixture is creamy. Add one tablespoonful of lemon juice and beat three minutes longer. Put two cups of sifted flour into the sieve, mix with it two level teaspoonfuls of baking powder, add one gill of cold water to the beaten egg and sugar, then sift in the flour and baking powder and beat well. Pour a little more than half of this mixture into two deep buttered tin plates. Pour the remainder into a small cake pan. Bake the parts in the tin plates for twenty minutes and that in the pan for twenty-five minutes. The two round plates are for the pies, and the sheet of cake may be used in the basket. It improves if kept a day or two. Split the round cakes and fill in with the prepared cream. To make the cream, put three gills of milk into the double boiler and place on the fire. Beat together in a bowl three tablespoonfuls of flour, two-thirds of a cup of sugar, one large egg and half a saltspoonful of salt. When this is light and smooth stir it into the boiling milk. Beat well for two minutes, cover the boiler and cook the cream for fifteen minutes, stirring frequently. Flavor with half a teaspoonful of vanilla or lemon extract. Cool and use. This cream is more delicate if one tablespoonful of flour be omitted and two eggs be used.—Home and Farm.

HOUSEHOLD HINTS.

Clean willow with salt water.

Use chlorinated soda for ink stains. Wash colored matting with salt water.

Rub out grease on a carpet with corn meal.

Use weak lye or saleratus water for cleaning paint.

Salt dissolved in alcohol will take out grease spots.

Darn thin places in blankets as you would stockings.

Whiting and benzine mixed together will clean marble.

A very fine steel pen is best for marking with indelible ink.

Have all flannel or broadcloth goods sponged before making up, to prevent spotting.

Shut a boiler of boiling water in a room from which the paper is to be removed.

Clean brass with hot water, rubbing then with a soft cloth and lemon juice, rinse in hot water and polish with a chamois.

A good grease eradicant: Two ounces of ammonia, one ounce of soap shavings, one quart of soft water and one teaspoonful of salt-peter.

Never place raw meat directly on the ice, as the juices are apt to be withdrawn; and never leave them in wrapping paper. Place in an uncovered earthen dish and then set on the ice.

SOLDIERS' COLUMN

GUNNING FOR MORGAN.

A Night of Trepedation for Some Ohio National Guard Boys.

In reading a recent description of Morgan's raid I became very much interested as it brought back memories of the days of my boyhood's excitement.

At that time I was serving an apprenticeship to a master, at Wheeling, W. Va., assisting him in the service of my country in turning the rolls necessary for the production of the sheeting of the sides of the gunboats and also the turret plates for the Mississippi squadron.

Almost every workman employed was sworn into the National Guard service for five years, but none of them were compelled to do service away from home, unless on account of the many raids of the bushwhackers who terrorized that section of the country, the principle ones being Kirby Smith, Jenkins, and Morgan.

Many of the workmen on the sheeting of the gunboats belonged to the 20th battalion, National Guards of Ohio. I belonged to Co. C. Not long before the close of the war the battalion was ordered to Charleston, W. Va., to take charge of the government stores there. The Regulars being thus relieved were sent to the front, and it is said that whilst there Co. C. so hated the sympathizers there that they made it extremely warm for them and were as glad to see them leave the town as were the Richmond people when the war closed.

In reading the description of the raid it brought back to my mind the excitement of the days as the news came of the progress of Morgan's recklessness as he traveled northward through Indiana and Ohio. As he drew near to our town, Portsmouth, it was expected he would attempt to cross on the Scioto Bar, where there was only about 18 inches' depth of water. Everybody was at a fever heat, but cooled somewhat on the arrival of about a dozen light-draft Ohio River gunboats, which anchored in front of the town, and a number of transports carrying Hanson's Corps, and then there appeared Judah's cavalry later in the day, who, after being fed by the citizens in their saddles, started out northward, as we supposed, to intercept Morgan's men.

About suppers time our battalion was ordered out to march northward and assist in intercepting Morgan's command. After having tramped in that direction about 12 miles we were halted for the night, and having nothing but blankets to protect us, took to the thickets of bushes which intervened between the Columbus pike and a creek which ran parallel with it.

Another company was camped across the creek on an elevation of about 200 feet above us, and one other company each were stationed as an advance and rear-guard. The company on the elevation was composed of young fellows accustomed to but store work and fine grub, while we fellows on the level were iron-workers and used to substantial food.

We had gone into camp for the night awful hungry, for in the excitement to fall in many had not waited for a square meal, and now would eat anything if it could be found. But as our company was at the rear, we were not in the greatest discipline by our officers, and no one would have known there was anything but pawpaws in those bushes. The company on the elevation had been a good target for the bushwhackers, for the large fires burning at this time for purposes we did not know, but for what we found out, and adopted their ideas later. Well, we were doing our best to get a nap when we heard shots from the front, and in a moment the bugle-sound to fall in. At the same time there came the tramp, tramp, tramp of horses' hoofs as they clanged on the boards of a bridge which crossed the creek about a quarter of a mile below, and excitement was running high among the fellows on the level, who were completely in the power of the raiders, who we believed would exterminate every man of us if we didn't exterminate them.

It was moonlight, but it shone with a shadow, on account of the trees in the rear which was about the surrounding country, and we could not discern the advancing column before they were nearly upon us. But we were ordered to form a line across the pike from a fence on one side to a creek on the other, which was supposed to be four deep, and to stay there and stop the enemy. The line was formed; some places it must have been a dozen thick, at others only the one man front. As the column drew nigh we were ordered to aim, but not to fire until told. The wait was only a minute or so, but it seemed about an hour.

Fortunate for all, we did not fire, for it was found to be no other than Judah's cavalry, who had, as I said before, took a northern direction, but had to change their route on account of farmers having cut down large trees across the path to prevent Morgan from coming in their direction.

It was a wonder the greenies of Co. C. did not fire on them in their excitement. When the members of Co. C. turned into the bushes the fellows on the elevation sent out several of their number into a farmer's chicken coop, and it is said, paid for a big lot of what they carried away from there. They were busy in the creek cleaning the fowls when the pickets gave the word. The fellows got so scared that they dropped their chickens into the creek and took to their heels up the steep hill. At the same time some of Co. C. went for the creek also, and were not particular, either, of finding a shallow place in their hurry to get over.

When the alarm was over our fellows slid down the hill quickly, to be in line before being dismissed again, and in crossing the creek discovered the chickens, gobbled them up before the other fellows returned, and brought them into camp. Judah's cavalry had not gone out that road more than half an hour when they returned and announced they could not get out into the country where Morgan would pass on account of obstruction of trees. So knowing we were in no danger whatever in camp there, and under representations to the commanding officers that we were nearly frozen with the night air, got permission to build a bonfire in the middle of the road, where we cooked the captured chickens on the points of our bayonets.—Joseph Hall, in National Tribune.

Exporting Cattle.

It is calculated that the cost of exporting a steer from Chicago and selling it in London is as follows: A 1,000-pound steer bought in Chicago at four cents a pound would cost \$52. Railroad charges to the sea, \$3.64; expenses on route from Chicago, \$1; ropes, baskets, etc., fifteen cents; feed for ocean voyage, \$8; attendance, seventy-five cents; insurance, \$1; ocean freight, \$10.80; salesman's commission, \$1.25. Total, \$73.39. In round figures, about \$73, or \$22 more than the first cost of the beast in Chicago. The steamship companies supply nothing but the space and the water for the cattle, the ship being fitted up and animals loaded under the supervision of officials of the Bureau of Animal Industry. Each animal is allowed a space two feet six inches wide on the top and two feet eight inches wide on the lower decks. The average price in 1893 for finest American cattle was nine to thirteen cents, the average being about 11½ cents. This certainly shows fair profit to cattle shippers.

The Department of Agriculture shortly will adopt some distinctive design of tags to designate the condition of meat from cattle slaughtered for the purpose interstate and foreign commerce.