Disposing of Wood Ashes.

If there is no receptacle for wood ashes the best thing to do with them is to broadcast them around the trees.

Ashes contain both lime and potash with a small proportion of phosphoric acid, and they benefit all kinds of trees, showing excellent effects for several years.

To Tell the Age of Eggs.

According to good authority a new laid egg placed in brine made in the proportion of two ounces of salt to one plut of water, will at once sink to the bottom. An egg one day old will sink below the surface, but not to the bottom, while one three days old will swim just immersed. If more than three days old the gwill float on the surface, the amount of shell exposed increasing with age, and if two weeks only, only a little of the shell will dip in the liquid.

A Plowsoil. shallow plowing, at the same When shallow plowing, at the same depth is continued for a series of years, if it is a clay soil, a solid plowsoil will be made that is to a greater or less degree, impenetrable to roots. Plowing should always be as deep as the soil will permit, and there is a signal advantage in loosening up the subsoil of clay lands with a subsoiler. It is not wholly uncommon to find a farmer raising good crops on heavy clay soil, while his neighbor, with the same kind of soil, and with similar cultivation, raises poor crops. The difference is often the result of the different depth of plowing. The successful crop grower plows as deeply as the soil will allow; the other man has been plowing shallow until he has made a packed subsoil of a portion of his fertile soil. The latter is a method that wastes fertility. Turn up all the good soil, unless it is several feet in depth as you find in some of the far western states and even in some portions of Minnesota.—J. W. Scott, in the Epitomist.

### Growing Apples Successfully.

Growing Apples Successfully.

Good apple trees can be grown on almost any rich soil, but one rich in potash is best suited for fruit growing. If time were no object I would prefer to grow my trees from the seed. Get pomace from the cider mill, wash out the seeds and dry them. About one peck of seed can be secured from 100 bushels of pomace. Prepare a plot thoroughly and sow about 25 seeds to the running foot, having previously soaked them in warm water. When the trees are two or three years old, graft or bud with the varieties desired. Grafting seems to be most popular, but I prefer budding. When the trees are five years old, they are ready to set in the orchard.

For the first few years but little pruning is necessary, the aim being to produce a, tree that will head near the ground. Such trees bear earliest and are most easily picked. Give the young trees frequent, shallow cultivation. I like to turn hogs in the orchard. Trees seem to thrive under these conditions. If near a good market early apples are the most profitable. Grow those with good flavor of fair size and fine appearance. Get the trees to bearing while young, as old trees are not profitable. Watch for the borer.

In my opinion it make little difference whether the trees are produced in the north or south. After the bioom is secured the character of the blossom determines largely the character of the fruit. If the blossoms are open and the stamens prominent fertilization is much more likely to occur. Trees which produce closed blossoms are of little value. Pick and pack winter apples tightly in barrels. They seem to keep best when put up in this way. I know an orchard which last year paid the owner \$122 per acre.—

J. J. Blackwell, in American Agriculturist.

Never shut up a flock of fowls in a small inclosure, thinking you will get any good returns from them. A dozen fowls should have at least a yard 100 feet square. The yard or yards may be more convenient by making them narrow and longer, according to circumstances. Use two-inch mesh poultry netting, four feet wide, with a board at the bottom, but none at the top. This bottom board or boards, is better two feet high, and thus prevents the males from fighting through the wire, but any width board is better than none at all, for with it you can better stretch the wire, and make a better job of fencing. It is not neccan better stretch the wire, and make a better job of fencing. It is not necessary to use a higher fence, or wire more than four feet, but no board must be used on top or the fowls will fly up on the top board and get out. If a chance bird gets over this fence, crop her wings by cutting only the long stiff flight feathers from the last view of wing. joint of wing.

If possible when making yards en-

close all the shade trees you can get in them. If trees are not already in them, loose no time putting them there. A mulberry thicket of the Rus-sian variety is the ideal tree for fowls. as the fowls love the leaves and the immense crop of berries they bear. We have a mulberry hedge through our yards and the low branches spread near the ground 10 feet or n out near the ground to reet or more, and the leaves are stripped up by the fowls and the shade is perfection. It is true that the poultry yard is a good place for fruit trees and fruit, but we can also have as many fruit trees in it as it will accommodate, beside the To have these yards arranged just right we should have a large enclosure adjoining well set down in clover, or grass of any kind, alfalfa clover being the best, or bokhara clover, which I think is equally as good, and thus let out each flock on this grass run every day a while. Fowls will do every day a while. Fowls will do fully as well in every respect and indeed better, when thus properly yarded, than if running at large. The egg output is largely increased by yarding properly.—A. H. Duff, in Farm, Field and Fireside.

## Use Lime in the Fall.

Use Lime in the Fall.

The fall season is believed to be the best for using lime. Every farmer understands that lime gives good results, but the action of lime in the soil differs according to the texture of the soil and the amount of mineral and organic matter contained. Lime is considered an alkall, and therefore keeps the soil sweet by neutralizing acids which arise from the decay of animal and vegetable matter in the soil. Mr. A. Peets, in England, who has done much to attract attention to the use of lime, states that lime, by keeping the soil sweet, enables the germs in the soil, both those which convert humus into ammonia and those which convert ammonia into nitric acid, to carry on the work which convert humus into ammonia and those which convert ammonia into nitric acid, to carry on the work which cannot be done in a sour soil. The carbonic acid being the product of the existence of the bacteria, it is as injurious to the existence of their well being as the impurities of a vitiated atmosphere are to the well being of the high types of animals. When nitric acid is formed by the nitrifying germs in the soil it unites with the lime to form nitrate of lime when otherwise it would be given off into the air. In the same way lime serves to preserve in the soil the soluble phosphates, also, the potash, by converting them into water soluble and citrate soluble phosphates. Also, the potash, by converting it into carbonate of potash, both of which valuable plant foods would be lost to a certain extent by drainage. A judicious application of lime also destroys many insect pests, which hibernate in the soil. Lime, in its dry state is very friable, and serves to disintegrate city lands in much the same way as burnt earth, thus being of assistance in rendering the soil lighter. No matter how fertile the soil may be as burnt earth, thus being of assist-ance in rendering the soil lighter. No matter how fertile the soil may be, one of the main advantages in using lime is that it fits the soil for the work of the organisms which derive nitrogen from the atmosphere, which explains, to a certain extent, why lime. benefits clover and other leguminous plants.

Though not regarded as entitled to a place in the list of available fertilizers, yet lime is a plant food, existing in nearly all soils, and is found in the ash of nearly all plants. In the soil it sets free and renders available other plant foods, also serving to store up food nearly in the soil and prevent its loss by washing away. No soil can be considered well manured with economy unless there is a sufficiency of lime present to get a maximum of efficiency out of the manure, it is claimed that there should be at least one-half percent of lime present in any soil or one part in two hundred. To test for lime put some of the soil in an ordinary tumbler or test tube, pour in a little water and stirwell, and then pour in a little muriatic acid. If it effervesces freely the soil contains sufficient lime, but if effervescence is feeble, or is not apparent, the soil requires lime. When lime is applied it should be in a very fine condition, air slaked, and should be distributed evenly by broadcasting over the surface of the soil. There are implements made for performing such work. The tendency of lime is to go down into the soil; hence it is not necessary to work it in with a harrow. It should not be left in piles in the fields, if it can be avoided, as it may prove injurious on locations where it is heaped. From 10 to 40 bushels of air slaked lime are used per acre, the quantity depending upon the soil and conditions, a larger proportion being used when the lime is applied at the time of plowing under a green manurial crop.

As lime is slow in its effect on most soils, the benefits derived from its use anay not be apparent for months, for which reason it is broadcasted in the fall so as to allow as much time as possible for it to remain in the soil, the land being plowed in the spring. Gas lime is also sometimes used, but being sulpide and sulphite of iime, and being very different from air slaked lime it does not give the same results, and may prove injurious if used in very large quantities. Gas lime does not ass

PEARLS OF THOUGHT.

While there's hope there's life.

Simplicity is the sign of serious

ess. The use of the arrow depends on Nothing is more profitable than

The shadow may be the price we

pay for the sunshine When ability meets opportunity the road of duty is plain.

Your promotion cannot be measured by your locomotion.

It takes the hammer of practice to drive in the nails of precept.

The best things will be but stuff to the man who only seeks the stuff. He who is only passively willing to do right will find himself actively wishing to do wrong.

The majesty of a man cannot be measured till he is seen standing in a magnificent minority.—Ram's Horn

WATER PURIFIED BY CZONE.

Moscow's Successful Plan for Keeping Down Infectious Disease Gorms.

A new method of sterilizing a city's water supply is being successfully operated in Russia and it was described at the annual meeting of the American Association of Water Works Engineers recently held here, in a paper forwarded by Nicholas Simin, chief engineer of the city of Moscow, where the system has been adopted and according to M. Simin is universally commended.

The plan is to sterilize the water by the introduction of ozonized air and

the introduction of ozonized air and it is contended on its behalf that it destroys all the bacteria in the water and makes it at comparatively small cost absolutely safe for drinking purposes. So far, the system has not been adopted outside Russia, but M. Simir contends that in this country condi-tions are more favorable than any-where else for its adoption, and he advocates its introduction here as tending to solve all problems in regard

where else for its adoption, and he advocates its introduction here as tending to solve all problems in regard to contaminated water supplies.

The system is based upon the principles that ozone burns all organic matter with which it comes in contact in water, including bacteria and their vital products, that with water which has been freed previously of suspended matter the destruction of the bacteria is equally efficient, no matter how great may be the number, and that the pathogenic bacteria are among the first to be destroyed.

The purification of the water in this way is simply a development of and an improvement upon the ordinary aeration of water by means of atmospheric air. The air, before coming in contact with the water, is subjected to a series of electrical discharges which convert the oxygen from diacomic oxygen to tetratomic oxygen, which is ozone and is remarkable for its power of oxidizing organic matter including the bacteria in water. The cost is put at \$6.25 for each million gallons, or in large plants even less.

Extensive experiments in the system have been made in France, Germany, Holland and Belgium. The necessary removal of suspended matter is accomplished by using a small quantity of coagulant for mere clarification. M. Simin says: Ozonization oxidizes not only the bacteria, but all organic matter. The water is rendered colorless, sparkling and odorless. It has an agreable and refresaning taste and there is introduced into it no foreign matter except oxygen. which of course, is beneficial.—New York Sun.

which of course, is beneficial.—New York Sun.

The House of Minos.
Discoveries in Crete seem likely rather to add to than detract from the mythical value of the stories of Minos, the law-giver, of the bull-headed Minotaur, of the 20 youths and virgins of Athens, of Ariadne and her bail of twine and of the hero Theseus who penetrated into the Labyrinth and slew the monster. In stead of being local variants of universal sun-myths, it is possible that all these persons lived and did much as the poets and story-tellers say. For the past two years Arthur J. Evans, an Englishman, who is at the head of the Cretan exploration fund, has been working on the site of ancient Knossos, and all that he has yet found is curlously corroborative of the ancient myths and legends. He has alid bare evidences of a civilization infinitely superior to that which existed at the same time on the Greek mainland. He has found relies of painting and sculpture which are far in advance of contemporary art in Egypt, and can be equalled only by that of the Periclean age which came 10 centuries later. He has discovered that linear writing was known and practised 700 years earlier than the first known historic writings. He has found evidences of a luxury and refinement which were at least equal to those of Egypt and Assyrin at their most flowery periods; and all these things in the fabled Labyrinth, the House of the Double Axe, the Palace of Minos.—New York Commercial Advertiser.

"Can Do" Will Not Do.
Out of all the men of the First Chinese regiment—we trust it will also be the very last—that went to the front in north China, not more than 200 returned to Wel-hal-wel. Few casualties occurred among them, but the large majority of the rank and file, who had devoted themselves most industriously to the collection of loot simply deserted with this spoil. We regard this attempt to make soldiers out of the "can do" Chinese coolie as an experiment, and we earnestly advocate its early abandonment.—Hong-kong Press. Do" Will Not De

MOTTOES OF STATES

How Some Phrases Became the Slog of Various Localities.

of Various Localities.

If you desire to have fun with a ed acquaintance ask him simple questions about his country, its history, financial condition, political divisions, geographical lines, elimatology, topography, etc. Questions that
any schoolboy can answer Dr. Knowall will stumble clumsily over, often
getting a bad fall. There is one question that I have never heard any one
answer, namely, "What are the mottoe' of the several states of the Union and their meaning?" A clever
man may name that of his own state
and guess at those of three or four
of the more important sister states,
but he is unlikely to know the meanings of any that are in the original
Latin. Try some able professor in a
crowd and see him flounder.

Ask the professor if he knows that
the great seal of the United States
was designed by an Englishman, Sir
John Prestwich, who also suggested
the motto, "E Pluribus Unum?" Our
ablest men had failed to propose anything acceptable, Franklin, Jefferson,
Adams, Lovell, Scott, Houston and
others wasting nearly four years on
the task. Franklin proposed Moses
dividing the Red Sea with this motto, "Rebellion to Tyrants is Obedience
of God"; Adams proposed the choice
of Hercules and Jefferson the children
of Israel in the wilderness. Doesn't
it seem funny? Some of the suggesttory, financial condition, political divisions, geographical lines, climatolo

of Hercules and Jefferson the children of Israel in the wilderness. Doesn't it seem funny? Some of the suggested mottoes were "Bello vel Pace" (If War or Peace), "Semper" (Forever), "Deo Favente" (With God's Favor), "Virtus Sola Invicta" (Virtue Alone Invincible), etc. After six years the Englishman's device was adopted, and it yet remains on the arms of the United States.

If the professor is familiar with

it yet remains on the arms of the United States.

If the professor is familiar with the obverse of the great scal, ask him what he has to say of the reverse, and the chances are 100 to 1 that he cannot receilect the unfinished pyramid, the eye in the triangle, the glory proper, the motto over the eye, "Annuitt Coeptis" (God Has Favored the Undertaking), and that under all "Nowus Ordo Seculorum" (A New Series of Ages). The obverse of the great scal, with its splendid eagle, the 13 stripes, the 13 stars, the glory breaking from the clouds and the "E Plurican, but the pyramid, the desert, the forbidding Egyptian sky and the eye in the triangle on the reverse are simply barbarous.

The great scal of the confederacy by a strange arbitrament of fate was never used. It was made in England.

a strange arbitrament of fate was never used. It was made in England and reached Richmond about the time of its evacuation by the armies of the lost cause and the confederate gov-ernment. Its motto was "Deo Vinernment. Its motto was "Deo Vin-dice" (God Maintains). The seal is a handsome silver die about three inches in diameter, bearing an eques-trian portrait of Washington (after the portrait in Richmond), surround

trian portrait of Washington (after the portrait in Richmond), surrounded with a wreath composed of cotton, tobacco, sugar cane, corn, wheat and rice—the principal product of the confederate states. It cost in England about \$600, with press, wafers, seal papers, wax, silk cords, etc. It was presented to the state of South Carolina about 1887 and is kept in the office of the secretary of state.

Ask the professor if he remembers that Minnesota, founded by Americans, is the only state in the Union that has a French motto. The one originally selected and ordered engraved was Latin, but the die was spoiled and the French substitute was adopted, "L'Etoile du Nord" (The Star of the North). Does the professor recall that Montana is the only state with a Spanish motto? Strange that fur traders should have adopted "Oro y Plata" (Gold and Silver). If you say that one state has a Greek motto he probably will do some pretty hard thinking before answering that it is California. "Eureka" is believed to be Greek for "I have found." The only Italian motto belongs to Maryland, and if originally belonged to The only Italian motto belongs to Maryland, and it originally belonged to the Calvert family, "Patti Maschi, Pa-role Femine" (Deeds Are Males, Words Females). To be a trifle plainer, Manly Deeds, Womanly Words." Ask the professor if he knows that Washington is the only state with an Indian motto, "Al-KI" is pure Chinook for "by and by." in the future or hereafter.—Philadelphia Times.

How Life Motion Pictures Are Made.
Lift-motion pictures are made with
one type of camera and projected by
two kinds of machines, says Roy MeArdle in Everyoody's Magazine. The
moving-picture camera is arranged so
that when turned by a crank, either
by hand or by an electric motor, the
sensitized film passes behind the lens
at a rate of 320 feet per minute. But
to make each picture, this film must
come to a dead stop for one-seventieth
part of a second, during which time
the shutter of the camera opens and
closes. Then in less that the hundredth part of a second the film moves
down about two inches, and the process is repeated until the picture is
finished. From one-half a minute to
a minute its sufficient time to take ordinary scenes in life motion; 500 or How Life Motion Pictures Are Made a minute is sufficient time to take or-dinary scenes in life motion; 500 or 600 men marching eight abreast can pass at a walk a given point in one minute; and so, in taking life-motion photographs of a parade, the operator of the camera turns on his machine only at the moment important per sonages are passing. Pictures three minutes in length or longer are often long pictures on the biograph grottresome.

British rivers and canals carry 35,-000,000 tons of merchandise a year, those of France 25,000,000, and of Germany 9,000,000 Church Tower Out of Plumb

Church Tower Out or Plumb.
It is not generally known that Vienna possesses a church with a leaning tower. This ancient edifice at Ober St. Velt was included in 1840 in the Vienna Bishoptic. It was burned down by the Turks in 1529, rebuilt in 1660, and again destroyed by the Turks in 1683. In 1742 the rebuilding of the church was once more under of the church was once more under Turks in 1683. In 1742 the rebuilding of the church was once more under taken, and was completed in three years. The new tower, owing to some defect in the construction, leans towards His Majesty's Thiergarten, although the droop is not observable from the high road.

Borneo in Line for Naval Honors.

The remote monarchy in Borneo
is a Rajah and a nephew of the Englishman who rescued the territory
from barbarism, has a little navy of
its own. It is made up of two gunboats of 175 and 118 tons respectively,
of low speed, and each armed with
two guns.

The Absence of It.

If there is any truth in the saying that happinces is the absence of all pain, mental and
physical, the enjoyment of it can only be
found in heaven. But so far as the physical
is accessing. is concerned, it is within easy reach; at least measurably so, as far as cure will go. The sum of human misery in this line is made up of greater or less degrees of physical suffering The minor sches and pains which afflict man kind are easy to reach and as easily cured There are none in the whole category, which, if taken in time, cannot be cured. They must in some form afflict the nerves, the bones, the muscles and joints of the human body. They are all more or less huriful and wasteful to the system. St. Jacobs Oll is made to cure them, to search out hidden pain spots, and to cure promptly in a true remedial and lasting way. Very, very many have not known happiness for years till they used it, and very many are putting off cure and happiness because they don't use it. sause they don't use it.

The annual expenditure of the Mexican Government to-day is three times what it was thirty years ago.

No matter what ails you, beadache to a cancer, you will never get well until your bowels are put right. Cascangras help nature, cure you without a gripe 'or pain, produce easy natural movements, cost you just 10 cents to start getting your health back. Cascangras Candy Cathartic, the genuine, put up in metal boxes, every tablet has C.C.C. stamped on it. Beware of imitations.

Eighty thousand cats are yearly expored from Great Britain. The total numbe on these islands is estimated at 7,000,000

on these islands is estimated at 7,000.000

5.100 Reward. 5.100.

The readers of this paper will be pleased to learn that there is at least one dreaded discase that it is cleared to learn that there is at least one dreaded discase that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the patient strength by building up the constitution and assisting nature in doing its value. The proprietors have so much faith in the constitution and assisting nature in doing its value of the constitution and assisting that the constitution and assisting that the cure. Send for list of testimonials. Address Catal't fail's family Pills are the best.

People in the West End of London are

People in the West End of London are spending much money this year on exter-nal floral decorations for their houses.

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British exports to the Cape and Natal increased thirty-four per cent. last year

I amsure Piso's Cure for Consumption save my life three years ago.—Mrs. Tromas Ros Bins, Maple St., Norwich, N.Y., Feb. 17, 1900

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An Incomplete House.

We run wild over the furnishings of a house, its furniture, carpets, hangings, pictures and music and always forget or neglect the most important requisite. Something there should be always on the shelf to provide against sudden caesnatities or attacks of pain. Such come like a thief in the night; a sprain, strain, sudden backache, toothache or neuralgic attack. There is nothing easier to get than a bottle of St. Jacobs Oil, and nothing surer to cure quickly any form of pain. The house is incomplete without it. Complete it with a good supply.

The diamond if laid in the sun and then carried into a dark room shows distinct phosphorescence.

Since 1850 the population of France has increased but 3,600,000.

PUTNAM FADELESS DYES do not stain the hands or spot the kettle. Sold by all druggists.

"When it comes to matrimony," says the cynical bachelor, "it seems as though no man ever gets old enough to know bet-ter."

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"For two years I suffered ter-ribly from dyspepsia, with great depression, and was always feeling poorly. I then tried Ayer's Sarsa-parilla, and in one week I was a new man."—John McDonald, Delidadabha Pa new man."-... Philadelphia, Pa.

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