

SALEM, FRIDAY, MARCH 9, 1877.

[For the Willamette Farmer.]

DEW AND FROST.

Now, as we approach that season of the year when we may look for dews and frosts, the one welcome and the other endured, it may be profitable to study the conditions favorable to their deposition.

It is a well known and an oft-observed fact, that on a warm day, if a water pitcher be filled with cool water, a film of moisture -dew--is soon deposited on the outside. This is caused by the cooling of the vessel below the dew point, and, in general, dew is deposited on any substance when that substance is cooled below the dew point. This dew point is not at a fixed temperature, but depends upon the amount of vapor in the atmosphere-the more vapor the higher the dew point.

All subfances at the surface of the earth send out rays of heat toward the sky. When these substances send out more heat than they receive, their temperature falls below that of the surrounding air. Whenever this is the case dew begins to be deposited. If objects, such as grass and leaves, did not fall below the temperature of the surrounding air, then no dew would be deposited.

For a moment let us see what this difference of temperature is. Observation shows facts like these. Piace a thermometer on the grass fully exposed to the sky, then

On	e six inc	mes	above it	wiii	rea	a o.	nigner
4.6	foot		4.1	66	**	70	**
**	twelve	feet	16		**	80	**
**			**	44	44	100	44
14	150	**	41	- 64	**	120	44

This conclusion is the result of a years observations in England. No observations of a like nature have been made in America to my knowledge.

Again, whatever obscures the sky hinders radiation. The thinest cambric has a marked effect. The near presence of buildings and trees is a hinderance, but by far the most efficient obstruction is watery vapor. Tyndall has shown that of all the vapors that of water cuts off the greatest number of heat rays. The effect of clouds on radiation, as might be supposed is very great. From an average of experiments it was found that a thermometer placed on grass fully exposed to the sky sunk below one suspended four feet from the ground as follows:

On	cloudless nights9.3°
On	nights half cloudy
On	nights principally cloudy 6 80
On	nights entirely cloudy349

Some substances are better radiators than others. When a thermometer placed on grass sinks 10" below one suspended four feet from the ground, a thermometer placed on wool will sink 12° or 15"; a thermometer placed on copper sinks 8"; on paper 6"; on brack only 3" or 4". The indication, from a great number of observations, is that sharp points radiate heat readily, hence those subsharp points are the best radiators. This, however, is not yet fully proven. When the temperature of plants by reason of radiation or other means, falls below the dew point, then moisture or dew is precipitated upon tuem, and if the temperature be low and the conditions favorable for radiation, the temperature just at the surface may fall below 32° above zero . In that case frost is formed. The best radiators, therefore, are most likely to be covered with frost and when those substances are growing plants, we say they are frost bitten. If my theory of sharp points be true, then woolly-leaved plants are the best radiators, and therefore most exposed to the killing effects of frosts. Therefore such plants as beans, potatoes, tomatoes, &c., are most likely to be frost-bitten. Peaches are doubtless more liable to be frost-bitten just after dropping the bloom than just before, because the young peach is woolly and a good radiator. On this theory, other things being equal, the peach is more tender than the plum or cherry.

I think plant life is not destroyed because frost gathers but because the temperature of the plant sinks below the freezing point thus congealing the sap, which in the form of ice expands and bursts the walls of circulating tubes, thus stopping the circulation, the same as a pump is ruined by the bursting of a pipe.

Can we artificially protect plants from frost? In many instances I think we can. Auything that will stop radiation is a protection. A sheet fastened by its corners so as to extend over a faverite peach tree is a protection. In favorable localities a thick cloud of smoke may be made to hang over an orchard thus shutting off the open sky. Sometimes rich nocks in the creek bottom are selected for garden spots, but afterward found to be exceedingly from y especially if the surrounding banks are of any considerable elevation. This fresty location may in many instances be improved by cutting away all timber and underbrush for some distance down the stream, so that the beavier air, which is always the colder may escape, but if the temperature of the surrounding air sinks much below 3.7 there is little hope did the killing was the aggressor from the for tender plants, D. M. C. GAULT.

"Horse-Heaven."

SPRINGWATER, Jan. 11, 1877. ED. FARMER: As I have never seen any communication from this section of Clackamas county, I thought it might not be amiss to drop you these few lines in regard to our community and things generally, Springwater is a section of country almost unknown to a great many of your readers, it being better known by the significant title of "Horse-Heaven." At first I will tell you where the place is situated, afterward in regard to its original name. It comprises a section of country near the foot of the Cas- 660.

cade range of mountains, bounded on the east by the Clackamas river, on the west by Clear Creek, making a ridge between the two streams from the foot of the mountains to the junction of the two streams, a distance of about fifteen miles, varying in width from two to three miles, comprising some of the finest lands in this county in which there are many good farms, the soil being dry and rather coarse, of dark redish color, and built on a good foundation of clay, with but few stone and no gravel, making it without a doubt one of the finest fruit countries in the world, for all fruits with the exception of peaches and grapes. Also it produces the finest quality of fall wheat, which together with fruit is the principal business of the inhabitants, the apples being of a quality adapted to late shipment to the California markets, which always has been a paying business, and in the future I think will still improve. Among the fruit-raising community we notice the fine orchards of Carroll Howell, H. Duboise, L. A. Lacy, E. B. Lewellen, B. Tucker, and many others, whose orchards have been bearing for 18 and 20 years and look as fresh and vigorous as they did 10 years ago. There are many young orchards being planted this winter, the principal part being plums and prunes and late winter apples.

The great drawback to this as well as other places remote from the railroad and river communication is the almost impassible condition of our roads. When will our Legislature cease its idle prattle about laws which tend only to benefit the few, and give us some good, sound, sensible Legislation in this matter which will tend to build up our country, make trade lively, and benefit the whole people? Well I had almost forgot to tell you as I promised in the begining about the origin of the name Horse-Heaven. It is this: in the terrible winter of '52 and '53, so well remembered by many old settlers, one Jackson herding a number of horses jost a great many. After much search he found them safe and doing well here. After taking them away, those that had strayed came back here immediately; hence the appropriate name.

More in the future. J. H. LEWELLEN.

Letter from a Boy. COTTAGE GROVE, Feb. 10, 1877.

ED. FARMER: I now make an attempt to write you a piece, and as it is the first time you must look over all mistakes. I am a boy twelve years old. In considering the matter, what was this world two thousand years ago, what is it now, and what will it be two thousand years from now? Men gradually improve their minds as generations go by, and leave off those superstitions idea which used to rule the world, and caused many an inno-cent man's blood to be shed for letting his opinions be known to those who profess to be wise, but at the same time are not. What be wise, but at the same time are not. What do we live for? Do we live to eat, and satisfy our stomachs, and nothing else? We should live to gam knowledge. What does a child know, but as time gives it, and it grows large, it becomes more acquainted with things which surround it through life. If a man lives ignorant through life, what can be stances presenting the greatest number of think he has done to the world? But if he cultivates his mind and is a wise man, he has nothing to regret. Allow no bad habits to float through your mind, to finally become second nature. Look how politics is carried on in the United States, and just so long will it be till men vote for the good of themselves instead of politicians. ULYSSES S. MARTIN.

> While Gon. Jewell was our Minister in Russia he visited the tanneries of that country and found out the secret of the Russia leather, beloved of book devotees. The secret is the result of the use of birch bark tar with

which the skins are dressed, in place of tal-low and grease, the latter substances being so largely used as food among the lower classes. This tar, which is carefully saved as it exudes from the wood when burned, was first used as a substitute for wheel gross in Russia, as it is to this day, and then for the filling and dressing of skins. By a sys-tem of careful inquiry, and literally follow-ing his nose during his visits to some of the great Russian tanneries and curriers' shops, Mr. Jewell found this compound in a great kettle ready for use, and thus the mystery was solved. It is not expensive, costing about \$10 a barrel, and be immediately ordered ten barrels and sent them to various leading leather manufacturers in this country, with instructions, and the result is that genuine Russia leather goods are now made in America, and doubtless will soon be sold soon be sold at nearly fifty per cent. below former prices.

—New York Tribune.

On Monday February 19th, Mr. Louis Schambein was killed near Express Ranel Baker county, by a man named D. W. Darling. The Dedrock Democrat has the follow-ing particulars of the homicide: It seems that during the excitement occasioned by the arrest of one Dowlby, some time since, Schambion got frightened and sold his ranch to Darling for \$400 in greenbacks and \$20 in coin, and started to leave the country, but finally concluded to return. He passed through this city last Sunday and said he was going up to reclaim his ranch; he also told numerous persons on the road that he "would have the ranch or kill Darling. arrived at the ranch, called Darling out, and offect in the eye and Killing him instantly. Darling at once sent for an officer and colivded blusself up. This is the same ranch over which Schambien and Bush had a shooting scrape last summer. The Bolse Statesman had a different version of the affair, in which it is said the quarrel arose in regard to some cattle, and that the party who

Stur CANAL .- Mr. Henry Willis, who claims to have had much experience in the construction of canals in Pennsylvania, has prepared an estimate of the proposed ship canal from Lake Michigan to the Detroit river, a distance of 178 miles. The excavations, he declares, will not average eight feet deep to obtain a depth of fourteen feet. There are not one hundred rods of rock excavation on the whole route, and but little if any hard pan or deep sloughs of quicksand. Mr. Willis' plan is to tow all vessels by locomo-tives, constructing a railroad on the bank for this purpose, which he will make self sup-porting by local freights of lumber, railroad ties, stone, etc. The distance saved between Chicago and Detroit by this canal will be 535 miles. The total cost is estimated at \$5,936,- Coal Oil for the Hair.

In his report on the trade of Nicolaieff during the past year, Consul Stevens states that that part of South Russia continued free from cattle plague. But his attention was drawn in summer to the several cases of sudden baldness of oxen and cows, and the loss of tails and manes among horses. He recollected that a former servant of his, prematurely baid, had got the habit, when trimming the lamps, of wiping his petro-leum-be-smeared hands in the scanty locks which remained to him, and the result was a much finer head of black, glossy hair than he ever had before. At the consul's sugges-tion the owner of several black cattle and horses affected as above mentioned tried the remedy, and found that it effected a quick and radical cure. The consul observes that the petroleum should be of the most refined American quality, and be rubbed in vigor-ously and quickly with the raim of the hand at intervals of three days, six or seven times in all. There is nothing more penetrating than petroleum, but we should prefer knowis efficacy in restoring human hair had been fully established before recommending experiments in that direction. It might be tested without fear of bad consequences on cattle and horses.

Marvels of Telegraphy.

Means having been found to talk audibly over the electric wires, we are are now told that an instrument has been invented by which perfect copies of messages, maps, pictures, etc., may be transmitted. J. G. Smith of Haversack, N. J., is the inventor. At the Centennial Exhibition, a specimen of the fac-simile telegraph was placed in Machinery Hall, connected with another instrument at the Weather Bureau at Washington. By means of it the Signal-Service weather maps made out at Washington were daily transmitted to the Exposition grounds, including the fac simile signature of the Secretary of War, which daily appears upon this map, and, having been lithographed, was printed and distributed precisely as it had been made out at Washington. The inventor is seeking capital to bring his invention into general use.

TREASURE RECOVERED .- The robbery of the stage between La Grande and the Uma-tilla on the 21st of October, 1875, is still fresh in the minds of our readers. It will be re-membered that the two men Maxon and Berry, were arrested for the deed, and after due trial were sent to the penitentiary for ten years each. After their imprisonment they confessed their guilt and told where the money was hidden. Col. H. C. Page, route agent of W. F. & Co., obtained a map showing the location of the place, and in company with Lot Liverpore, agent at company with Lot Livermore, agent at Pendleton, and Mr. Maxon, father of one of the prisoners, proceeded to the piace and succeeded in finding the treasure, which consists of a gold bar, two bags of dust, and a yeast powder can containing some gold notes and currency, altogether amounting to some \$4,000.--Democrat.

DISTURBING PUBLIC MEETINGS.-It may not be known to everybody that the laws of Oregon adequately protect all people met for religious worship, or indeed any public meeting or assembly of people; religious or otherwise. Section 655 of the Code provides —"If any person shall wilfully disturb or disquiet any assembly or congregation of people, met for religious worship, whether in a houseor in the open air, by either uttering any profane discourse, committing any rude or indecentact, or making any unnecessary noise within the place of where such moeting is held, or so near it as to disturb the order and solemnity thereof," such per "upon conviction thereof, shall be punished by imprisonment in the county jail not less than one mouth, nor more than six months, or by fine not less than ten dollars, nor more than two hundred dollars."

An English hardware agent who had been trying to drum up trade in Canada, sends to the Manchester Guardian a few doleful lines:
'I have just returned from a trip through
the lower provinces. I find that the whole
country; is overun by American travelers
soliciting orders for their manufactures at for their manufactures at almost any price to secure a sale. I feel sure in my own mind that a very large proportion of the hardware trade is lost in England. For instance, of Birmingham and Wolverhampton wares they have secured many of the leading lines—namely, door locks, mertise locks, chest and till locks, emphoard locks, butts and hinges, carriage bolts, gas and boiler tubes, scales, and to a great extent hollow-wares. From all I can learn, they are in a position to retain the hold they have

The London Echo predicts that the decis ion of the electoral commission in Washington will be secepted as final by both parties says that the Americans carry their love of the law to a point of obedience which Englishmen do not understand: "There is a strength in the moderation of the American character which we only read of when it is at its highest tension under military pressure or great political excitement, as in a Presidential crisis. The people who in victory could so easily forget all they had suffered in the civil war are a people to be credited with strength in their moderation; it is only a strong people that does not attaint, impeach, nor imprison for political offenses.

FATAL ACCIDENT .- Yesterday as the steam-Vancouver was making her regular trip to Vancouver, while opposite Ward's Land-ding Mr. Flagerald, theman, stumbled and fell overboard, Being unable to swim he immediately sunk beneath the surface. The accident was not discovered in time to rescue the unfortunate man. The body was brought board and every effort possible under the circumstance, made to bring him back to consciousness, but to ne avail. Mr. F. was a man of perhaps 30 years of age, a good faithful hand, and leaves a wife and five children to mourn his untimely end .- Bee.

For an empress without an empire, Mrs. Louis Napoison is pretty well off. She has real estate in Paris valued at \$1,055,000, on which there are mortgages to the extent of \$250,000. Than in the provinces scattered about she has estates worth at least \$1,500, 000. Only one of these is mortgaged. Ba-sides all these, the Bonaparte family possess large estates in Spain, Italy, Switzerland, Corstea, and England. As for the personal property, estimates vary, some of them reaching nearly \$15,000,000, and others falling as low as \$500,000.

The efficial returns of the British Board of Trade of the commerce of Great Britain for the first seven months of jast year show adverse baladce of \$512,265,000 against that country, the imports being \$1,088,835,000 and the experts \$596,470,000. Trade with the United States is dwindling in almost every article of any importance.

ELECTON, Feb. 22, 1877. Mr. Lditor: In a communication from this place, dated Feb. 4th, and published in the FARMER Feb. 16th, the name of J. L. Smith was printed Rev. J. L. Smith, when it should not have been.

LONDON, March, 2.—The Queen has com-manded Josiah Aelson, original of Mrs. Stowe's "Uncle Tom," to wait upon her at Backingham Palace to day.

Benj. Franklin in France in 1776.

October 27th completed one hundred years since Dr. Franklin left America for France, on the greatest diplomatic mission ever known to this country, and the like of which it will never know again. He had been appointed a Commissioner on the 26th of September, but it was not until a month later -until Sunday, the 26th of Octoberthat he left Philadelphia quietly; and on the 27th he embarked at Marcus Hook (Chester) on board the sloop-of-war "Reprisal," Captain Wickes. This littl craft, which has a good name in the naval history of the revolution, took some prizes on her way to France, and had a very rough time of it, but she got into Quiberon Bay on the 29th of November, having crossed the ocean in thifty-three days, which was a good passage for those times. It was not until the 3d of December, however that the doctor landed, he being set ashore, that day, at Auray, in Brittany. He reached Nautes on the 7th, and had to stop near that city for some days on account of weakness, for on laming he could hardly stand, and no wonder, for to make the winter passage of the Atlantic in a small vessel was no triffe to a gentleman who was in the closing days of his seventy-first year. He arrived at Paris on the 21st of December, and entered upon those labors the effect of which will be felt while the world shall endure. Had he failed in France, the independence of America long would have been postponed-perhaps it never would have been made an accomplished fact-and, consequently, the lives of us all have been closely affected by the action of the great philosopher-diplomat-ist. The commonest events of our state. On ist. The commonest events of our every-day existence are ordered by what he did in the twelve month after he reached France, the treaty of alli-ance between France and the United States being completed in the early part of 1778, but resolved upon and prepared some weeks earlier. Frankiin was the real workman in the business, and without his presence in France not and ORANSE. even the surrender of Burgoyne, and Washington's daring attack on the victorious English at Germanton, would have induced the French government to go all lengths in our favor. What Franklin then accomplished is the greatest instance of "the one-man power" known in our history, unless Hamilton's financial work be considered the equal of it as we think it should be .-- C. C. Hazewell

And now comes a Boston woman who, to out-do her fashionable sisters with their twenty-button gloves, has invented and wears forty-button stockings.

Schools to teach girls plain needle work are proposed in New York. It is needto say that the success of such schools will prove only sew-sew.

According to the judgment of a New Milford man, who had seven men to assist him to his feet, "the hind end of a mule is much more premature than the front end."

It looks funny to see theater-goers taking seats near the doors on pretense that they can see better.

"Giles, can you conjugate 'behaves?" "Behaves—behooves—beehives—be——" "See, here! You go and stand in the cor-

cent nickel into the contribution box. A hotel ghost comes under the head of

inn spectress.

Can a good plain cook be also a pretty

The People want Proof.

There is no medicine prescribed by physidans, or sold by Druggists, that carries such evidence of its success and superior virtue IS BOSCHER'S GERMAN SYRUP for Severe Coughs, Colds settled on the breast, Conumption, or any disease of the Throat and Lungs. A proof of that fact is that any per-son afflicted, can get a Sample Bottle for 10 cents and try its superior effect before buy-ing the regular size at 75 cents. It was lately been introduced in this country from Ger many, and its wonderful cures are astonial ing every one that uses it. Three crelieve any case. Try it. Sold by-

PREMIUMS FOR NEW SUBSCRIBERS

Quite a number of persons have availed themselves of our offer to allow a years subscription to any one who will send us three now names, of subscribers who will pay their subscriptions in advance or within the year, so we repeat the proposition for the benefit of our readers.

Any person procuring three new subscribers who will pay in advance or will pay within the year, can have their own copy free for the present year.

It is of course advisable to send the money with the names where practicable, but where it is desired we can wait until next. Fall. Aur one not a subscriber can have the

FARMER one year on the same terms.

send are paid up.

These of our friends who are in arrears can have a year's credit on account for every three subscribers produced for the FARMER. All will of course understand that we cannot credit them until the subscriptions they

As we cannot afford to pay traveling agents, we make this liberal proposal to any and all persons, whether they are subscribers of the Paretra or not.

Times being a lutle hard, just keep this matter in mind and save something for yourselves as well as help us.

Do all members of your Grange or Lodge, and all your responsible neighbors take the FARMER? If not, why not? If they will take it, you can make a commission by sending in their names.

F. A. Smith, Artist,

Salem, Oregon, dealer in Stereoscopes and Stereo-scopic views, and Scenes of Salem and the surround-ing country. Life.size Photographs, in India Ink. Of or Water Color.

PROTECT YOUR BUILDINGS. Which may be done with one fourth the usual expense, by using our

PATENT SLATE PAINT

(Fifteen Years Established) MIXED RDADY FOR USE.

Water-proof, Durable, Fire-proof. economical and ornamental.

A roof may be covered with a very cheap shingle, and by application of this slate be made to last from 30 to 25 years. Old roofs can be patched and conted, looking much better and lasting longer than new shingles without the slate, for

One-third the Cost of Re-shingling. The expense of slating new shingles is only about the cost of simply laying them. The paint is ring-rnoop against sparks or flying embers, as may be easily tested by any one.

IT STOPS EVERY LEAK.

and for the or iron has no equal, as it expands by heat, centracts by cold, and xeven cracks nor scales. Roots covered with Tar Sheathing Felt can be made enter-tight at a small expense, and preserved for This State Paint is

EXTREMELY CHEAP. Two gallons will cover a hundred square feet of "Min-gle roof, while on tin, Iron, folt, matched boards, or any smooth surface, from two quarts to one gallon are required to 100 square feet of surface, and al-though the paint has a heavy body it is easily ap-plied with a brush,

No Tar is used in this Composition.

therefore, it neither cracks in Winter, nor runs in Summer.

On decayed shingles, its fills up the holes and porces, and gives a new substantial roof that will last for years. Curling on wampen shingles it brings to their places, and keeps them there. It fills up all holes in felt roots, stops the leaks—and although a seried ver, rain does not affect it a few hours after appring. As nearly all paints that are black contain tax, he sire you obtain our genuine article, which (for shingle roofs) is

CHOCOLATE COLOR.

TIN ROOFS

our red color is usually preferred, as one coat is equal to five or any ordinary paint. For

BRICK WALLS

Our name of rands the only reliable State Paint ever introduced that will effectually prevent dampness from penetrating and discoloring the plaster. These paints are also largely used on out houses and fonces, or as a priming coat on fine buildings.
Our only colors are CHOCOLATE, RED, BRIGHT KED,

NEW YORK CASH PRICE LIST.

Als cents per square foot)

2000 rolls 2-ply Tarred Rooting Felt, at 1% cents
per square foot,
2000 rolls 3-ply Tarred Rooting Felt, at 2% cents
per square foot,
2000 rolls 3-ply Tarred Rooting Felt, at 2% cents
per square foot,
200 rolls Tarred Sheathing at % cent, per square
foot

bot, 5000 gallons fine Enamel Paint, mixed reacy for use.

N. Y. SLATE PAINT COMPANY. 102 &104 Maiden Laze, New York.

Beaver Glen Nursery.

A CHOICE COLLECTION OF

Fruit Trees AND SMALL FRUITS.

G. W. HUNT. "Sounds just as loud as a new quar- Proprietor, SUBLIMITY, Marion Co. Or Feb9m2

For Sale!

THE FINE RESIDENCE corner of Commercial and Division streets, in desirable situation, with house large, well finished, and convenient arranged, and grounds tastefully ornamented. Will esold vory low and on accommodating erms. Apply to

Patton's Block State St., SALEM

Expectorant

Stubborn Coughs and Colds yield promptly to the healing and cura-

tive properties of Dr. Jayne's Expectorant. It leasens and premotes the expectoration of irritating matter,-mitigates much pain and distress, and checks inflammation.

Asthma, Bronchitis, and Throat Troubles are at once relieved by

Dr. Jayne's Expectorant. It removes constriction of the Bronchial tubes, loosens phlegm, soothes and heals the mucous membrane, arrests any feverish tendency, and helps to forward a gradual cure.

Consumption, Pleurisy, and Lung

Affections are generally controlled and amelierated by Dr. Jayne's Expectorant. It saves the lungs from much irritation and distress, by relieving them of the irritating matters suppresses inflammation and gives suppresses inflammation and gives by which they are clogged, it also the affected parts a chance to heal,

Whoeping Cough, Croup and Hoarse-11888 are efficacionaly treated by Dr. Jayne's Expectorant. It removes

difficulty of breathing and oppression in the threat or lungs, promotes the ejection of mucus and subdues the violence of these complaints at the outset. It is a Safe Family Curative, of long-established reputation, and where promptly administered, has enabled many to escape serious Lung Affections.

T. A. DAVIS & CO., Wholesale Agents, Portland

DR. E. Y. CHASE, BREVET Lt. Col., late Surgeon U.S. Volunteers, -