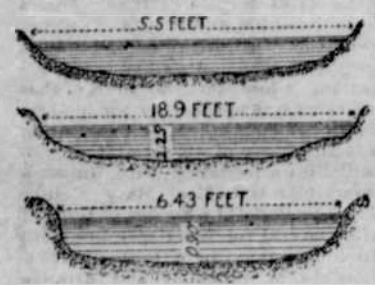


FARM GARDEN

IRRIGATION CANALS.

Their Carrying Capacity—Effect of Form, Friction and Plants.

East and south, as well as west, the interest grows in irrigation. Samuel Fortier of the Utah station has investigated the carrying capacities of a number of irrigation canals and presents in a recent bulletin the results of his work in the hope that they may aid those who operate irrigation systems in the west to arrive at a better understanding regarding the behavior and carrying capacities of irrigation canals. In planning new systems it is necessary to know the approximate volume of water which each new channel will carry, and Mr. Fortier's experiments may therefore be also of value for sections of canals.



CROSS SECTIONS OF WESTERN CANALS. The carrying capacities of new irrigation canals and ditches during the first season of their operation are less than in subsequent seasons, providing the same conditions are maintained. The coefficient of friction in canals well lined with sediment in good order and long in use is less than has been usually supposed.

The frictional resistance of coarse materials, such as gravel, pebbles or cobble rock, depends to a large extent on whether such material is well packed or loose.

A rough channel exerts a greater influence in retarding the flow of a small ditch than the same degree of roughness exerts on the large canal or river. In the past canal work has been so much overdone that the injurious effects of the growth of aquatic plants, the effect of water plants in checking the flow and lessening the capacity of irrigation canals may be much greater than a rough, uneven channel.

In parts of the arid west where such vegetation grows abundantly the canals should be built in such a way as to prevent its growth, or, if this is impracticable, to facilitate its removal.

SOY BEANS.

What Kansas Farmers Think of Them—A Point About Seed.

The Kansas experiment station has received reports from 276 farmers who raised soy beans in 1900. Those reports came from 72 counties. One hundred and forty-nine farmers write that the soy bean is a profitable crop, 44 have a favorable opinion, but need further trial; 34 report unfavorably, and 35 think the crop a total failure. The others did not express an opinion.

Most of the successful farmers plowed and harrowed their ground as for surface planting of corn. A few listed or double listed, either listing shallow or else harrowing the furrows nearly full. The Early Yellow gave the best yield, only a few farmers having success with the late varieties.

The favorite method of planting was with a grain drill, stopping up all the holes but those that put the rows 32 inches apart and dropping single beans two or three inches apart in the row. Corn planters with drill attachments and one horse corn drills were frequently used. Objections were made that corn planters put the rows too far apart for best yield.

The best yields were usually secured by planting as soon as corn planting was finished. Several farmers in eastern Kansas report that with their beans may be planted any time before July 1. The same cultivation as for corn was usually given. Five toothed cultivators were frequently used.

The season was exceptionally unfavorable. Hot winds and drought from the time of blossoming to maturing cut the crop short and shriveled the beans. This was immediately followed by heavy and long continued rains that injured the beans in shock and stack. The worst pest was rabbits.

The yields were from nothing to 31 bushels of grain per acre and up to two tons of hay per acre, the hay being reported as nearly equal to alfalfa in value and superior to clover. Most of the yields were from 12 to 20 bushels per acre. On the college farm soy beans yielded 7.4 bushels per acre along side of alfalfa crop yielding 20 bushels and corn a total failure.

Many reports show a failure of seed to grow. Soy beans for seed must be kept in cool, well ventilated bins, in thin layers. In buying seed empty the sacks as soon as received and keep the beans spread out in a dry, cool place in a thin layer.—H. M. Cottrell.

Explant.

Row explant in the hotbed and transplant high to other beds or pots. Plants must have good beds, for a check in their growth means all the difference between profit and loss, says Bailey.

A Funston Story.

A Parkersburg (W. Va.) correspondent writes to the Cincinnati Enquirer: H. P. Camden, a nephew of former United States Senator Camden of this

CASTORIA

For Infants and Children.

The Kind You Have Always Bought

Bears the Signature of J. C. Watson

WASHINGTON LETTER

(Special Correspondence.)

There are signs in the sky that the senatorial committee programme may undergo a further shift. The news that Senator Frye had been considering a proposal to give up his chairmanship of the committee on commerce in order to take charge of the committee on foreign relations has evidently stirred up a good deal of feeling in Maine, where the shipping and fishery interests are so prominent. The senator's constituents do not like the idea of his leaving a place where he has the opportunity to be of so much service to his state in order to take one whose subjects, though not new to him, are not nearly so familiar and are of vastly less local interest at his home.

If this influence prevails, as it now bids fair to do, and Senator Frye decides definitely to remain where he is, Senator Cullum of Illinois, it is understood, will resign his chairmanship of the committee on interstate and foreign commerce and step to the head of the foreign relations committee.

This announcement would prove a disappointment to Senator Lodge, whose ambition to be chairman of the foreign relations committee was stimulated by his experience during the few months directly following the death of Senator Davis of Minnesota, when, owing to the absence of Mr. Cullum in Illinois, he filled the chairman's place. In point of rank he comes next to Cullum, and with both Frye and Cullum out of the way he would become chairman. He has assumed, as many others have, that Mr. Cullum would find it agreeable to retain his present chairmanship and leave the foreign relations open, but perhaps at the instance of the administration Mr. Cullum has since his re-election expressed himself unequivocally as preferring the foreign relations chairmanship.

The Canal Treaty.

Alluding to the hint contained in the Associated Press dispatches to the effect that Secretary Hay finds the senators whom he has sounded still unfavorably disposed toward any canal treaty that England would be likely to accept, a prominent Republican member of the senate committee on foreign relations said:

"It seemed to me when those amendments to the Hay-Pauncefote treaty were first proposed in the senate that they were liable to lead to unfortunate complications. It then seemed and still seems that England in order to make the concessions then asked for would want something in return in the shape of Alaskan concessions. This our people would not listen to. I believe we should consider the canal question itself and not complicate it with Alaskan issues which we may have with Great Britain. I would soon be glad to make a deal over them, and I do not see anything that the American people would be willing to give up."

American Republics Congress.

The commission recently appointed by the president to represent this country at the congress of American republics to be held at the city of Mexico in October will meet in Washington shortly for the purpose of organization. It is expected that a chairman will be chosen, and there is some talk that this honor may go to ex-Senator Davis of West Virginia. There are a number of applicants for the position of secretary, but the choice of this officer will be deferred until the organization is well along.

A Handsome Book.

The handsomest book ever issued by the United States government has just appeared. It is entitled "The History of the Capital of the United States." The volume is of massive proportion and is heavily bound in thick boards covered with red morocco. It is very sumptuous in appearance, with its decorations of gold, its wide margined pages and its beautiful photographs, the latter numbering about 150. As a specimen of bookmaking it will compare with anything issued by a private firm and proves that the government printing office can execute the highest grade of artistic work as well as the plain and routine printing of governmental business.

Overrun With Gypsies.

Washington streets are overrun with gypsies. Two hundred encampments just over the District line in Virginia are attracting throngs of visitors. Many of the women are exceptionally beautiful. They have only recently arrived in this country, and their knowledge of the language is decidedly limited. The women in picturesque gowns are devoted to roaming the streets in the shopping district, where the window displays appear to fascinate them. They do a vast amount of fortune telling, which is difficult to understand, and make picturesque street scenes which Washington is unaccustomed to.

The sidewalk which surrounds the White House grounds was thronged with people who were intently gazing in the direction of the entrance to the executive mansion.

"Anything happened to the president?" breathlessly inquired a newcomer of a policeman as he struggled for a good place.

"No," said the officer. "They are just watching those crows build a nest in that tree in front of the White House."

Organization in New York.

The quarterly bulletin, recently issued of the New York bureau of labor statistics reports 1,679 unions in the state, with an aggregate membership of 242,484 working men and women. It is an increase of 14 additional labor organizations during the last quarter.

CASTORIA.

The Kind You Have Always Bought

Signature of J. C. Watson

THE SWIFT SPECIFIC CO., ATLANTA, GA.

"Nerve Waste."

One of the most helpful books on nerve waste ever issued is that entitled "Nerve Waste," by Dr. Sawyer of San Francisco, now in its fifth thousand. This work of an experienced and reputable physician is in agreeable contrast to the vast sum of false teaching which prevails on this interesting subject. It abounds in carefully considered and practical advice, and has the two great merits of wisdom and sincerity. It is endorsed by both the religious and secular press. The Chicago Advance says: "A perusal of the book and the application of its principles will put health, hope and heart into thousands of lives that are now suffering through nervous impairment." The book is \$1.00, by mail, postpaid. One of the most interesting chapters—chapter xx, on Nerves and Nerve Tonics—has been printed separately as a sample chapter, and will be sent to any address for stamp by the publishers, The Pacific Pub. Co., Box 2658, San Francisco.

Utilizing the Waste Product.

A parish in the highlands has been cut off from communication with the nearest town owing to a severe snowstorm. The Scottish American Supplies began to give out, and the minister was much perturbed in mind as his snuffbox was quite empty. The Sabbath came round. How was he to get through his discourse without the aid of his snuffbox? He appealed to his faithful parishioners, the sexton. Alas, he was in a similar unsatisfactory predicament. How was it to be remedied? Andrew shook his head, thought long and suddenly disappeared. Presently he returned with something resembling snuff wrapped carefully in paper. The minister took a hearty pinch or two and then asked: "Where did you get it, Andrew?" "Please, sir, I just went and swept the pulpit out," was the reply.

Poor Staid.

"No," said the retired showman, "I won't say that we had the biggest plant that ever happened, but it is a solemn fact what I am going to tell you. This plant had a penance, or whatever you call it, for trying new styles of whiskers."

Tons Involvement in Rock.

The Rev. W. Buckland, from experiments on tons in holes of oolite limestone and sandstone covered with glass, finds that while limestone served them alive, sandstone killed them. His conclusion is that unless a load imprisoned in a stone gets a little air it cannot live a year, and unless it gets food it cannot live two years.

The British Workman.

Much discussion has lately arisen as to the physique and condition of the British workman. The pessimists tell us that he has begun to degenerate, but he is being steadily outstripped by his brethren on the continent and in America, and, worst of all, that he shows a tendency to forsake the beer and beef of old England and betake himself to the consumption of jam. There can be no doubt that the standard of comfort among the working classes of England has never been anything like so high as it is today. Nobody who has visited such a place, say, as Hampstead Heath on a holiday occasion, when it is almost wholly given over to the working people of the east end, can question this for a moment.

In the matter of dress the crowd is quite on the level where stood the middle classes of 20 or 30 years ago. Smart clothes are the rule among men and women alike, and, though it may be urged that at holiday times the people naturally put on their "best," one does not need to be very old to remember the day when their best was not half so gorgeous nor half so costly as it is now. In the matter of living, too, conditions have improved enormously, and, in spite of the jam binge, there can be no doubt that the dinner pail here is not only full, but, broadly speaking, of sound and honest quality and that the worker with 7s 6d a week can do reasonably well, not only as regards the necessities, but also as regards some of the minor luxuries of life.—London Letter.

The Machinists and the Shorter Day. In the United States and Canada there are about 500 unions of machinists, having a total membership of about 40,000. More than half this number have secured from their employers the nine hour day, and the other half will quit work if the demand is not met by May 20. Back of every union is the International Association of Machinists, and back of this is the American Federation of Labor, with which they are all affiliated. It is said that the employers are inclined to grant the nine hour demand, and it is not believed that the men will ask for any radical change in the wage schedule.

Polison Oak and Polison Ivy are among the best known of the many dangerous wild plants and shrubs. To touch or handle them quickly produces swelling and inflammation with intense itching and burning of the skin. The eruption soon disappears, the sufferer hopes forever; but almost as soon as the little blisters and pustules appeared the poison had reached the blood, and will break out at regular intervals and each time in a more aggravated form. This poison will linger in the system for years, and every atom of it must be forced out of the blood before you can expect a perfect, permanent cure.

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SSS Nature's Antidote FOR Polison Oak and Polison Ivy

is the only cure for Polison Oak, Polison Ivy, and all noxious poisons. It is composed exclusively of medicinal herbs. It is the time to get the poison out of your system, as delay makes your condition worse. Don't experiment longer with salves, washes and soaps—they never cure.

Mr. M. Marshall, bookkeeper of the Atlanta (Ga.) Gas Light Co., was poisoned with Polison Oak. He took sulphur, arsenic and various other drugs, and applied externally numerous lotions and salves with no benefit. At times the swelling and inflammation was so severe he almost blind. For eight years the poison would break out every summer. His condition was much improved after taking one bottle of S. S. S., and a few bottles cleared his blood of the poison, and all evidence of the disease disappeared.

People are often poisoned without knowing when or how. Explain your case fully to our physicians, and they will cheerfully give such information and advice as you require, without charge, and we will send at the same time an interesting book on Blood and Skin Diseases.

THE SWIFT SPECIFIC CO., ATLANTA, GA.

Something New

Just published by the Southern Pacific company is a pamphlet upon the resources of Western Oregon, which includes an excellent map of the state, and contains information on climate, lands, education, etc., existing industries and their capabilities. Attention is also directed to such new fields for energy or capital as promise fair return. This publication fills a need long experienced by Oregonians in replying to inquiries of eastern friends. Copies may be had of local agents of the Southern Pacific company, or from C. H. Markham, general passenger agent, Portland, Oregon.

For Over Fifty Years.

An old and well tried remedy. Mrs. Winslow's Soothing Syrup has been used for over fifty years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic and is the best remedy for diarrhoea. Is pleasant to the taste. Sold by druggists in every part of the world. 25 cents a bottle. Its value is incalculable. Be sure and ask for Mrs. Winslow's Soothing Syrup and take no other kind.

White Wax.

The white wax exported from China is made by the curious method of using insects in its production. These insects are found in brown pen shaped excrescences or galls attached to an evergreen tree called the "insect tree." The galls are gathered in May and carried in heading flight to the market towns by bearers, who travel at night so that the heat may not force the insects to emerge during the journey.

They are then placed on the "wax tree," which is a stump varying from 3 to 12 feet in height, with numerous branches rising from the top, similar to the pointed willow.

The wax insects are made into small packets of 20 or 30 galls, which are fastened together with rice straw. These packets are suspended close to the branches under which they hang. On emerging from the galls the insects creep rapidly up the branches, to which they attach themselves and begin forming a coating of wax that in about three months attains a thickness of almost a quarter of an inch.

The branches are then cut off, and after removing as much of the wax as possible by hand they are put in a kettle of hot water, when the remaining wax floats on the surface and the insects finish their term of usefulness by going to the bottom.

Formation of Dew.

Ground a little below the surface is always warmer than the air above it. So long as the surface of the ground is above the dew point vapor must rise and pass from the earth into the air.

The moist air so formed will mingle with the air above it, and its moisture will be condensed, forming dew, wherever it comes in contact with a surface cooled below the dew point. In fact, dew rises from the ground.

But how is the dew formed on bodies high up in the air?

Dew does not rise in particles, as it was once considered to fall in particles from the clouds. It rises in vapor. Some is caught by what is on the surface of the earth, but the rest ascends in vapor form until it comes in contact with a

much colder surface to condense it into moisture.

The vapor does now flow upward in a uniform stream, but is mixed in the air by eddies and wind currents and carried to bodies far from where it rose. In fact, dew may be deposited, even though the country for many miles all around be dry and incapable of yielding any vapor. In such cases the supply of vapor to form that dew would depend on the evaporation of the dew and on what was wafted over by the winds.

When Mrs. Gilbert Lost Her Spectacles.

The only time I recanted newspaper chatter was when I had my spectacles stolen. They were snatched from my belt, the case I wore being torn away. I spoke of it to Mr. Dorney, and the story went round the theater. Somehow the reporters got hold of it, and they made a great deal of it. It was really too bad of them. I felt the more because I had managed to keep a much more serious theft an absolute secret. That was at the time when so much fun was being made of the "robbery of jewels" form of the theatrical advertisement. I had a very valuable pair of earrings taken from my pocket most cleverly, and I was on my way to play for a charity toy. However, I kept my loss quite to myself. And then to be brought before a sympathetic public as the loser of a pair of spectacles!—From "The Stage Reminiscences of Mrs. Gilbert."

Learned a Language in Twenty-four Hours.

Of Cardinal Mezzofanti, who could speak 56 dialects and languages, it is related that while he was at the Vatican a traveler arrived in Rome from a distant country whose language no one who met him could understand. Cardinal Mezzofanti was sent for and found that even he had never heard it spoken. By means of signs he learned the stranger's errand and that he had with him a dictionary of his native tongue.

It Is Queer.

Belgium—It's past understanding how some people live. Grizzards—Especially those persons who tell you there is no money in their business, but who keep on working at it with all their might just the same as if it were paying them 100 per cent profit.—Boston Transcript.

Summons.

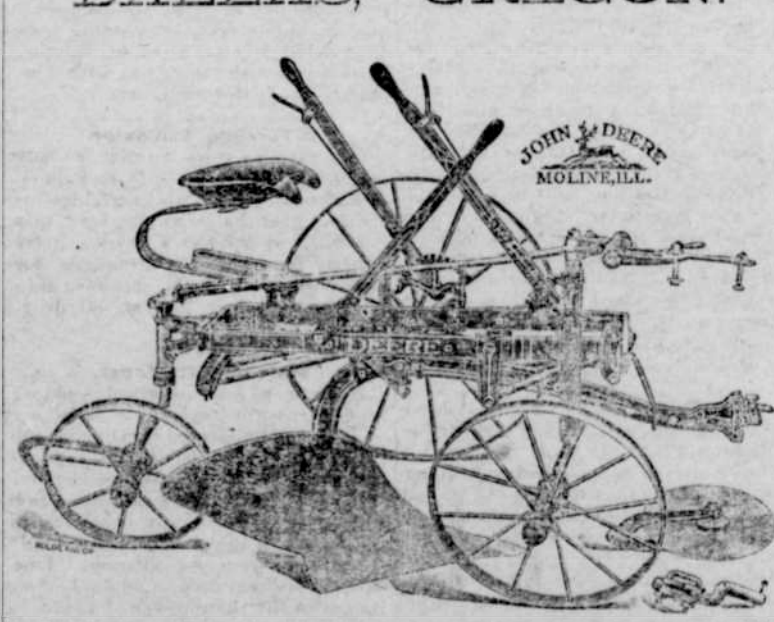
In the circuit court of the state of Oregon for the county of Polk, s. s. Vankin v. Scott, plaintiff, Elizabeth Scott, defendant.

IN THE NAME OF THE STATE OF Oregon, you are hereby required to appear and answer the complaint filed against you in the above entitled suit within ten days from the date of the service of this summons upon you, (served within this county) or if served without this county, within ten days from the date of the service of this summons upon you. And if you fail to answer, for want thereof, the plaintiff will take a judgment and decree as prayed for in his complaint, to-wit: That the bonds of matrimony now existing between the plaintiff and defendant be forever annulled and dissolved on the charge of desertion and that the plaintiff pay the cost of this suit. This summons is published by order of the Honorable J. E. Sibley, judge of the circuit court of Polk county and state of Oregon duly made at chambers on the 15th day of May, 1901. The date of the first publication of this summons is on the 17th day of May, 1901. J. C. Adams, Attorney for plaintiff.

J. PERRY CALDWELL

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Leave Portland 8:30 a. m. 7:30 p. m.
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Arrive Astoria 12:30 a. m. 11:30 p. m.

Arrive Los Angeles 1:30 p. m. 7:00 a. m.
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Arrive Fort Worth 8:30 a. m. 8:30 a. m.
Arrive City of Mexico 9:30 a. m. 9:30 a. m.
Arrive Houston 4:30 p. m. 4:30 p. m.
Arrive New Orleans 6:30 p. m. 6:30 p. m.
Arrive Washington 6:45 a. m. 12:15 p. m.
Arrive New York 12:45 p. m. 12:15 p. m.

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See L. N. Wood's agent at Dallas station or at Corvallis, C. H. MARKHAM, G. P. A., Portland, Oregon.