



Farm Law.

Laws governing the ownership of real estate have been evolved from the mutual rights of man to the soil and his relations to his fellow man and the public welfare. Ownership of land is one of the great upholding forces of modern civilization. No man, however, acquires a right to real estate that he can maintain against the public welfare, which has the power to condemn property needed for public use, or that is a menace to public life and health. All men's rights in real estate are circumscribed by the rights of adjoining owners and the paramount interests of the general government, which can take possession of the property after appraisal and condemnation for the general welfare. If the government did not retain the right to condemn and take property belonging to private parties, then the individual holding would be an empire in itself and block all progress and public improvements.

All real estate is defined and circumscribed by boundary corners and lines as established by government survey. The States are divided into counties, and the counties subdivided into townships, and the townships into sections of 360 acres. Each section is divided into quarter sections with appropriate descriptions in the conveyance of the property. The meridian lines were used in description of real estate, and in the government survey section and quarter section corners are established to mark the boundaries of public lands.

In purchasing land it is well in the preliminary examination to ascertain the corners and boundary lines of the property and ascertain if the adjoining owner is satisfied with the division fences. If one purchases eighty acres and he apprehends that the land is short measure it would be better to have the property surveyed before the transfer is made. The government corners should be marked by a stone not easily removed, and if the corner is so designated subsequent surveys may make the property more or less than the description, but cannot change the monumental corners established by the original government survey.

Farms are occupied individually and not in severalty, and the new purchaser should ascertain before closing the purchase the division of the line fences which inclose the property and discover if such division is satisfactory to adjoining property holders, as expensive litigation has often grown out of a misunderstanding of land boundaries and division fences. Every purchase of real estate should be hedged about by the removal of every obstacle that might cause a misunderstanding between neighbors.—Goodall's Farmer.

Unique Vegetable Digger.

Something new and novel in the way of vegetable diggers has been devised by a Kentucky farmer, the object of the contrivance being to catch up onions and similar vegetables and the necessarily accompanying dirt and by slight shaking separate the dirt from the vegetable. It can readily be carried in the hands of the operator, who can easily shake the digger after he has taken up a quantity of the soil and vegetable. In construction the digger resembles a miniature wheelbarrow, the receptacle forming the body being made of sheet metal containing innumerable perforations. At the front or small end of the receptacle is a swinging door, beneath which is a small shovel. In operation the digger is used as a shovel in lifting the vegetable and the surrounding soil. The digger is, then shaken, separating the vegetable from the soil, and allowing the latter to pass out through the perforations.



VEGETABLE DIGGER.

Feed for Poultry.

The effect of meat rations was tested at the West Virginia Experiment Station, where one pen of fowls received a ration largely of corn and another starch grains, while another pen was fed partly on meat and fresh bone. The meat-fed fowls laid 7,555 eggs, while the grain-fed birds laid 3,431, or less than one-half as many as those receiving the nitrogenous ration. The eggs from the meat-fed fowls were larger, much firmer, rather better and produced far more vigorous chickens than those of the others.

How to Load a Wagon.

It is generally believed that the load pulls easier if put well forward on the wagon. But this is not so on the ordinary wagon, where the hind wheels are larger than the front ones. Should the wheels be equal in size, the load should

be equally distributed. If the trucks are so low down that the horses have an upward pull on the load, then it would be all right to put the load well forward. The load should be proportioned to the surface contact of the wheels. A large wheel sinks less than a small one; therefore, the load should be heaviest on the hind wheels. Distribute the weight so that no one wheel or no one side is carrying the greater share, lest it make the draft excessive for the tonnage carried.

Simple Egg-Tester.

The average person evidently imagines that it is impossible for the dealer to distinguish bad eggs and good eggs. This supposition is natural, inasmuch as so many eggs of questionable purity reach the dinner table. If the dealer desired he could readily discard eggs of doubtful age, as there are numerous devices for testing them. One of the most recent is shown in the accompanying illustration, patented by a Minnesota farmer. It consists of a wooden frame, or casing, across the top of which is a leather support for the eggs, the latter resting in flexible apertures. In the bottom of the casing is an inclined mirror. Mounted on the upper part of the frame is a light-reflecting hood in which is placed a lamp or other suitable illuminant. In operation eggs are placed over the aperture and the light falling on the eggs will cast a shadow upon the mirror if they are unsound. The soundness of the eggs is indicated by the clearness of the light that falls through them upon the mirror.



EGG TESTER.

Feed for Cows.

The cow likes a variety of food, and it pays to give it to her. For the stimulation of the appetite and aid in digestion, some of her feeds should be green and succulent, such as roots and silage for winter. Some linseed meal should be given at frequent intervals. It is not only a rich feed, but an excellent regulator of the digestive organs. Clover and alfalfa hay are both rich in milk-forming elements, and give bulk to the ration. Some corn should be given daily, especially through the cold months, as cows greatly relish the grain, and it helps in forming butter fat and in producing animal fat. Give the cows about all they will eat up clean of each feed, but shift changes often, not only the kinds, but the amounts of each kind, at different times. This change gives a stimulating variety to feeds, and the cows thrive and produce on it.

The Frozen-Meat Trade.

Frozen Chinese pork is to be imported into England, which recalls to the mind of a writer in the London Chronicle the fact that the frozen meat trade is nearly a century old. On Jan. 30, 1816, three Eskimos arrived at Harwich, England, by the packet from Gothenburg, bringing five sledges packed with ptarmigan, blackcock and other game, frozen and packed in air-tight cases. The enterprising Northerners had to pay over \$250 duty on the consignment and \$50 for carriage from Harwich to London; but, as the game was in excellent condition, it found a ready sale and brought high prices. The Eskimos did so well out of the speculation that they remained in England for several months, spending their profits in royal fashion; but, despite the success of the experiment, it does not appear to have been repeated.

To Fatten Fowls.

A good method for fattening fowls is given by a reader: Shue the fowls up in a dark place, with just enough light for them to see to eat, and supply them well with grit and water. Corn meal, ground oats, cracked wheat and shorts mixed in equal portions should be fed. Feed them as often during the day as they will clean up the food, and bear in mind the importance of "stuffing" them. They should be fed after dark every evening, as well as very early each morning. Half a dozen fowls together will fatten more rapidly than a large number, and if it is practical to pen them off, six to a pen is the right number. Give no green stuff to these fowls, but rations of cooked potatoes, rice, corn bread, cracked corn and whole wheat may be given. Fowls crowded and stuffed in this way should be in fine condition in three weeks.

Milk and Honey.

Milk and honey are an old combination. The Hebrew people over 3,000 years ago were promised a land "flowing with milk and honey." These two articles of food have long been a symbol of plenty and healthfulness. Milk and honey should be a combination found on every farm in abundance, especially for the use of the children. Milk, of course, the one great food, and honey supplies in perhaps the purest form known material for the satisfaction of the child's natural craving for sweets, which should be supplied in some way.

OREGON WATER LAWS.

Review of Provisions of Code Passed by the Legislature.

By John H. Lewis, State Engineer.

A water law for Oregon, which is believed to be the best among all the states of the Union, became effective on February 24, 1909. Complete state control is provided. No water right can hereafter be acquired without compliance with this law. It abolishes the old requirement of posting a notice on the bank of the stream. Hereafter, the priority of all rights will be determined by the date of receipt of an application in the office of the state engineer. If the application is defective, it will be returned for correction without losing its priority.

The leading feature of this bill is the limitation of franchises to the use of water for power development to a period of 40 years from the date of application, and the requirement that reasonable fees be paid to the state in all cases by those benefitted. The schedule of fees has been designed to ultimately pay the entire cost of administration, thus relieving the general tax payer, who derives only an indirect benefit through the added prosperity resulting from increased development.

The payment to the state of an annual license fee of 25 cents to \$2 per horse power hereafter appropriated was provided by the Eaton bill, which takes effect on May 22. This fee is to be collected by the board of control and adjusted from time to time, based upon the percentage of power appropriated which is put to beneficial use.

In brief, the new water code creates a board of control, composed of the state engineer and the division superintendent of each of the two water divisions into which the state has been divided, and upon this board rests the responsibility of determining and recording all water rights heretofore initiated, the granting of new rights in accordance with law, and the protection of all water rights through a comprehensive administrative system.

Before any protection can be granted to vested rights under the new law, such rights must first be determined and recorded. Where numerous ditches tap a stream, and especially if the stream is long and the summer flow limited, state protection is necessary.

The cost and time consumed in determining rights under the old law was very great. The water users along Silver creek, in Lake county, joined in a friendly suit to determine their rights, so that a water master could be employed to distribute the meager supply, thus preventing annually recurring disputes. Fourteen lawyers were employed on only one side of this case. Recently, the case was decided by the Supreme court, after nine years in courts. During this time, one of the contestants died, one became insane, and a number, tiring of the conflict, sold to others.

If the experience of Wyoming is any guide, the most complicated case can probably be decided, under the new law, within a year.

The cost is set out in the law and is designed to be less than the cost of an abstract to the land. For irrigation rights, the cost will be fifteen cents per acre for each acre for which a water right is claimed up to one hundred acres, five cents from one hundred to one thousand inclusive, and one cent for each acre in excess of one thousand acres. For power, the cost will be twenty-five cents for each theoretical horse power claimed, up to and including one hundred, fifteen cents from one hundred to one thousand, inclusive, five cents from one thousand to two thousand, inclusive, and two cents per horse power above two thousand, the minimum fee in either case to be two dollars and fifty cents. For any other claim to water the fee is five dollars.

The procedure is simple. A list of questions is sent to each claimant or owner on the stream. He is required, under forfeiture of his right, to answer the questions which, together with a survey of streams and land areas and measurements of the water supply by the state engineer, furnish all necessary information for an adjudication of rights. The maps and all statements, signed under oath before the superintendent, are submitted upon a given day for examination by all interested parties. If anyone thinks his neighbor is making an erroneous or extravagant claim, his testimony can be contested. By this procedure, all errors can be corrected and, if necessary, further testimony taken. As soon as possible, an order is entered by the board, determining the rights. This order is put into execution at once and later filed with the Circuit court for confirmation. If no appeals are taken, the order is confirmed. If the case is not reopened within six months, the decree becomes final.

Upon such final determination, water right certificates are issued in accordance with the decree. These certificates are then recorded in the county records and bear the same relation to the water title as the patent from the United States does to the land title. The right of each user from the stream or from a large ditch, will thus be determined. The law makes the grant to the use of water for irrigation appurtenant to the land irrigated. The title thereafter passes with the land,

thus making it necessary to follow land titles thereafter in abstracts.

No right to the use of water from the streams of the state can hereafter be acquired for any purpose without compliance with law. For intelligent use and development of our water resources some central office must be provided, where a reliable record of all water rights can be found. The diversion of water without the necessary permit is made a misdemeanor.

The application should be accompanied by a fee of \$3 for examining the same, together with the additional fees, depending upon the proposed use, as follows:

For irrigation, graduated as follows: 15 cents per acre from 0 to 100 acres; 5 cents per acre from 100 to 1,000 acres; 1 cent per acre for each acre in excess of 1,000. For power, graduated as follows: 25 cents per horse power from 0 to 100; 10 cents per horse power from 100 to 1,000; 5 cents per horse power in excess of 1,000. For any other purposes, including applications by municipalities, \$5.

Three different forms are provided for the appropriation of water; one to be used in case of new appropriations, another to be used where the appropriation is to be made by the enlargement or extension of existing works and a third form where the application is for a permit to construct a reservoir and impound surplus waters. A separate application must be made for permit to appropriate stored waters prior to its application to beneficial use. This application is made on the first form mentioned above, and is then known as a secondary permit, and must refer to the primary permit, and to the reservoir from which the water supply is to be derived. These forms, together with instructions, can be secured by addressing the state engineer, Salem.

Work must commence within one year from the date of application and be completed within a reasonable time, as fixed in the permit, not to exceed five years.

If the water is applied to the beneficial use within the time allowed, proof is taken of such fact by the division superintendent and a certificate issued the applicant by the board of control. This certificate is of the same form as issued to early appropriators upon determination of their rights, as described above.

The new method of initiating water rights may seem cumbersome as compared with the old method, but it is worth all it costs. The right, when finally granted, is absolutely determined as to all rights hereafter initiated. It will be determined as to all the world, after a determination as above outlined. This determination is made without cost to the new appropriator.

No large canal can be operated without one or more water masters to divide the water in accordance with the rights and needs of the different laterals. Likewise, irrigation from public streams cannot be a success without water masters to regulate diversions.

The use of streams to convey stored water to its place of use was impossible under the old law, and the construction of many reservoirs was thus prevented.

As rights are determined under the new law, districts are created and water masters appointed, where demanded by the water users, to enforce the decrees of the board or of the courts. This officer is accountable to the division superintendent and protects, not only the early rights, but also all new rights and the rights of reservoir owners.

When a headgate has been lawfully closed to admit the proper quantity of water, or shut entirely, it is a misdemeanor for the owner to disturb it. If the gate has been wrongfully opened during the night, the presence of moisture in the ditch in the morning is declared to be sufficient evidence to convict the owner of unlawful use.

With such an officer available, capital will not hesitate to invest in storage works. The water, when released, can and will be protected by the water master, no matter how many ditches intervene, and the owner permitted to divert an equal amount, less that lost by seepage and evaporation.

The final object of the new water law is the protection of vested rights, when determined, and to encourage the development and use of our unappropriated waters. This encouragement is provided in the definite procedure for acquisition of new rights. The fees are of no consequence to the one who contemplates putting the water to beneficial use. In fact, the certainty of right, which is essential as a basis for intelligent investment on a large scale, is worth far more than it costs. The old-time notice-man, whose chief business under the old law was to hold up the public, is effectively discouraged by these fees.

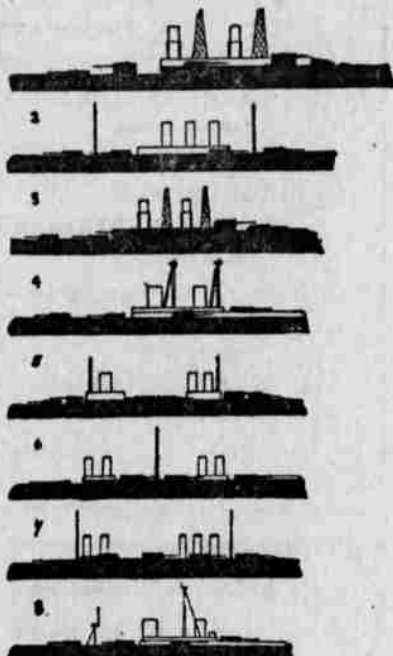
The office of the board of control is located at Salem. It is composed of three members, appointed by the governor as follows: John H. Lewis, state engineer, Salem, president; F. M. Saxton, Baker City, and H. L. Holgate, Bonanza, Klamath county. Messrs. Holgate and Saxton are respectively the division superintendents of the Western and Eastern water divisions. The board, or its respective members, will be glad to assist the public as far as possible under the new code and will furnish information upon request.

THE WORLD'S DREADNOUGHTS.

How We Compare with Other Countries in Monster Battleships. The silhouettes, says the London Graphic, show the size of our original Dreadnought, compared with later Dreadnoughts and Super-Dreadnoughts designed for our own and foreign navies. With the Neptune we shall complete a group of eight homogeneous ships.

The Germans, like ourselves, have eight vessels in hand of one type, but of displacements rising from 17,000 to 19,000 tons. As regards their armament, it is said that they will mount twelve 11-inch guns, eight on the center line and four in turrets placed en echelon, as in the Invincible class, so as to fire on either broadside. On the face of it this gives them a broadside of 9,120 pounds as compared with 6,800 pounds for the Dreadnought. But the bearing of the turrets en echelon is very limited and their net broadside, effective against any ship not absolutely on the beam, is 7,600 pounds.

The eight American Dreadnoughts represent three different types. The first two (Michigan) carry eight 12-inch guns on the center line, their weight of broadside being the same as the Dreadnought's, but without guns in reserve. The Delaware class (four ships) have 10 12-inch guns on the center line, with a broadside of 8,500 pounds; but the guns are so crowded that great interference is certain and their ahead and astern fire is weak.



SIZES OF DREADNOUGHTS.

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| 1. U. S. Wyoming. | Beowulf. |
| 2. New Japanese. | 6. Italian Dante Alighieri. |
| 3. U. S. Delaware. | 7. French Danton. |
| 4. H. M. S. St. Vincent. | 8. H. M. S. Dreadnought. |
| 5. German Ersatz. | |

The third class, just sanctioned, are the monsters Oklahoma and Wyoming, of 26,500 tons apiece, mounting 12 12-inch, of which 10 will fire on either broadside and two be held in reserve as in the Dreadnought.

The Japanese in their new ships of 22,000 tons (of which there are three or more building) have adopted practically the same design, though some accounts give them 14 guns, the foremost and aftermost turrets, it is said, being designed to carry three guns each—a most unlikely arrangement.

Finally, the French, in the Danton class, of which the first ship, the Voltaire, was launched on Jan. 10, have adopted a two-caliber plan similar to our Lord Nelson and Agamemnon and the Japanese Satsuma and Aki. That is to say, in addition to four 12-inch guns in turrets fore and aft on the center line they carry 12 9.4-inch, mounted in pairs in three turrets on each broadside. Many naval officers affect a preference for this armament, but the reason is not very clear. The guns are crowded together and must interfere with each other, and, moreover, on whatever bearing the vessels fight they must always have an inordinate proportion of their armament out of action.

Why Is This Thus?

Working on the most trustworthy statistics obtainable in regard to road accidents an esteemed contemporary has figured out that the automobile is just ten times as destructive as the horse. The automobile is supposed to be entirely under the control of the driver, while the horse has a will of his own, and the inference is that a horse is more or less difficult to control for this reason. Why does not this theory work out in practice?

Turkey's Products.

Turkey's principal products are tobacco, cereals of all kinds, cotton, figs, nuts, almonds, grapes, olives and all varieties of fruits. Coffee, madder, opium and gum are largely exported. In 1900, 7,500 chests of opium, or 105,800 pounds, were sent from that country. Carpets also form an important article of export and are made on hand looms.

How busy the hounds would be if all the wolves were hunted as they deserve!

Women rule the waves of the matrimonial sea.