CONCERNING WINDMILLS.

Best of Sizes Used In Irrigation—Care In Running.

Of the devices for operating pumps for irrigation upon the great plains windmills are the most important, and they will remain so from the fact that the winds blow almost incessantly over this vast country. The forms of windmill are many, but for the purpose of raising water for irrigation the available types are comparatively restricted. It is impossible to recommend specifically any of these, but the farmer intending to practice irrigation must endeavor to ascertain what kind of windmills have given best satisfaction in his locality—in a word make use of the experience of others. With a view to assisting in a selection are here appended some suggestions from the last department yearbook:

The simpler the mechanism the better. For use upon the great plains a complete metal construction is preferred. Extreme lightness and cheapness of construction should be looked upon with suspicion. When the first cost of a mill is low, the expense for repairs, etc., is extremely great. The cost of a good windmill erected in place and attached to an efficient pump will of course be dependent not only on the kind of machinery, but also on the location of the pumping plant, the cost of freightage and handling being an important item. Upon the great plains, at moderate distances from a railroad, a windmill with wheel 8 feet in diameter and suitable pump placed at a depth, say, of from 20 to 40 feet from the surface can be had complete for from $70 to $125, a 12 foot mill will cost from $100 to $200, and a 16 foot mill from $170 to $300. The cost of the individual items can best be ascertained from dealers' catalogues.

It is as a rule, wiser in procuring an irrigating plant of this character to purchase a moderate sized or small wheel at first, this being properly proportioned to the size of the pump and the amount of water to be had. If the farmer is successful with this smaller machinery, he can readily supplement it by other windmills at a later time. The windmill is a piece of machinery which with moderate care and the exercise of common sense in keeping it oiled and properly adjusted will last for many years.

As a general rule the fast running windmills with back gearing are most successful. In these the pump rod is not connected directly with the shaft of the mill, making a stroke for every turn of the wheel, but a gearing is interposed, with the result that usually two or more revolutions of the wheel are required in each stroke of the pump. This reduces the resistance to the turning of the wheel, allows it to run in a lower wind, and thus results in the pump being operated on an average for a greater number of hours per day. If a plunger pump is used, it is desirable to have one with a relatively long stroke, so great that it is moderately high winds the motion mill not be so rapid as to cause the machinery to pound at the beginning and end of each stroke. As ordinarily constructed a considerable portion of the force of the windmill is employed destructively in a rapid succession of sudden jerks on the pump rod in its alternate up and down motion. For this reason a continuous running pump, such as a centrifugal, would be more efficient if the driving power were uniform.

Where Alfalfa Will Thrive.

It seems to be the impression among people not having experience that alfalfa requires a certain kind of soil. In commenting on this impression a Kansas contributor to Western Rural writes:

Now, there is no plant with which I am acquainted that is worth anything that will grow on a greater variety of soil. In fact, it will grow on almost any soil the tap root can penetrate, providing it is well drained. Water will kill it, and it is about the only thing that will, except a sharp plow. Many believe it will not succeed on a clay subsoil and have not tried it for that reason. But letters written by those who are raising it and published in Secretary Coburn's book show that many of the most successful ones are growing it on heavy clay subsoil, some on gumbo. But it is not water soaked—that is the point. It prefers to go six to ten feet for water and will go much farther, but will be short lived where the water is within less than four feet of the surface.

As to its drought resisting qualities, perhaps the history of a field of my own will be the best illustration. This field yielded six past season two and one-half tons of hay and eight bushels of superior seed per acre, the whole worth about $60 per acre, besides lots of good pasture during mid fall, and this without irrigation and in a season so dry that all other farm crops—even the sorghums—were a total failure and the second year of the drought.

Conditioners For Late Use.

Cauliflowers for late use can easily be grown by utilizing some of the cold frames. Prepare a bed the size of the frame intended to be used by manuring with well decomposed manure, forking in over deeply, and on soils liable to club root add a sprinkling of fresh air slaked lime. In this bed set out, 18 inches apart each way, well established plants that have been previously transplanted. Cultivate often, water thoroughly when necessary. As soon as cold weather is at hand set the frame in position, leaving on the sashes on cold nights and days. All the sunshine possible should be admitted whenever the weather is congenial by raising the sash at the rear or higher part. This should always be done when the temperature outside is one 40 degrees. In mild seasons this excellent vegetable can usually be kept by this method until Christmas, if properly attended to. For this purpose there is no better variety than a good strain of the Early Snowball, says American Gardener.

Ice In Cream.

It has been our opinion for many years that it is better not to put ice in ice cream if it can be avoided, but if it needs cooling to do so with a circulating cooler, through the pipes of which cold water runs.

We do not know that the per cent of fat in the cream has much to do with the quality of the better, but we know this—there is less loss in churning rich cream and churning at as low a temperature as it will churn than in churning poorer cream which must be churned at a higher temperature. With the poorer cream there will be more buttermilk than with the richer cream, and when tested with the Babcock tester it will be found to contain fully as great, if not a greater, per cent of butter fat.—Hoard's Dairyman.

Fodder Shredder.

Several stalkers and feed cutters have also fodder shredding attachments which can be affixed and made to cut the cornstalks after they have been cut off. In

FODDER SHREDDING ATTACHMENT.

the device here shown a stalk of fodder is bent down over the rounded upper part and is drawn by pinions by the teeth beneath. The lengths of the cut fodder are 3 to 6 inches, and the shredding may be gauged fine or coarse, as desired.

Begin on Dairy Farmer and Cow.

The very foundation of success in dairying is not the improvement in cheese factory, or any of the secondary aids and advantages that have clustered about it, but it is the dairy farmer and the cow. The great vital question all the time is: How shall the dairy farmer be induced to look upon himself and his own growth in dairy intelligence as he ought to if he expects to prosper, and, second, how shall we improve the dairy cow so that she shall become more fully a source of profit? The cultivation the dairy farmer becomes posted on the true purpose and meaning of the dairy cow the quicker will reform come in dairy breeding.—Hoard's Dairyman.

It has been authoritatively stated that "the cost of pumping the great quantities of water used in irrigation prohibits the raising of water to heights of much over 50 feet." There are exceptions to this rule, especially in the case of windmills and of hydraulic engines or water wheels.

Growing Children

SOME CHILDREN grow very slowly, does not do their food assimilate, they are pale, weak, and lack vitality. Give them Scott's Emulsion of Cod-liver Oil with hypophosphites to feed the muscles and nerves. It gives sound body, make strong bones, healthy nerves.

Scott's Emulsion of Cod-liver Oil with Hypophosphites is the remedy for growing children. It gives sound body, makes strong bones, healthy nerves.

NOTICE.

NOTICE IS HEREBY GIVEN THAT THE City Council of Salt Lake City will act as a Board of Equalization on Sewers at the Council Chamber, City Hall, on Monday evening, November 29th, 1897, at 7:30 o'clock, for the purpose of equalizing the assessment for certain sewers (sewer district No. 1 of said sewer district, viz.: Third East street, between South Temple and First South streets, in said sewer District No. 1 of said sewer district, which has been duly filed for inspection and published September 29th, 1897.

DAVID S. SPRY,
By Deputy.
Salt Lake City, Utah, November 23rd, 1897.

New York Gold Mining company, with the principal place of business at Salt Lake City, State of Utah.

NOTICE IS HEREBY GIVEN THAT AT A meeting of the Board of Directors held on the 21st day of November, 1897, it was ordered that an assessment of one-tenth (1-10) of a cent per share was levied on the capital stock of the corporation, payable on the 6th day of December, 1897, to Lewis M. Cannon, Secretary and Treasurer, at Zion's Savings Bank, No. 1 south East Temple street, Salt Lake City, Utah.

Any stock upon which this assessment may remain unpaid on the 13th day of December, 1897, will be delinquent and advertised for sale at public auction, and unless payment is made before will be sold on the 4th day of January, 1898, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

LEWIS M. CANNON,
Secretary.
No. 1 south, East Temple St., Salt Lake City, Utah.
Dated Nov. 24th, 1897.

ASSESSMENT NOTICE.

Yankee Mining Company, situation of principal place of business, Salt Lake City.

First South st., Salt Lake City, Utah.

NOTICE IS HEREBY GIVEN THAT AT A meeting of the Board of Directors of the Yankee Mining Co., held at Salt Lake City, Utah, October 26, 1897, an assessment of one cent per share was levied on the capital stock of the corporation, payable at once to Evan Jones, Secretary, at the office, West First South street, Salt Lake City, Utah, and any stock upon which the assessment shall remain unpaid on the 16th day of December, 1897, will be delinquent and advertised for sale at public auction, and if payment is not made before will be sold on the 5th day of January, 1898, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

EVAN JONES,
Secretary.
Salt Lake City, October 26, 1897.

NOTICE TO CREDITORS.

Estate of Mary Ann Conlt, deceased.

NOTICE IS HEREBY GIVEN BY THE undersigned, administrator of the estate of Mary Ann Conlt, deceased, to the creditors of, and all persons having claims against the said deceased, to exhibit the same with the necessary vouchers, within four months from the date hereof, to the undersigned, at the office of his attorneys, Messrs. Richards & Williams, in the Eagle Block, Salt Lake City, State of Utah, the same being the place of business in the county in which the said administrator, the office of his attorneys for said administrator, is located.

Also building, 36-40 west second South street, Salt Lake City, Utah.

JOSEPH O. CLE
Administrator of the Estate of Mary Ann Conlt, deceased.

Dated September 25, 1897.

FRIDERICK I. RICHARDS and EDWARD RICHARDS, Attorneys at Law and Counselors, room 40-41 Eagle building.

NOTICE TO CREDITORS.

Estate of Elizabeth Hoffstetter Pratt.

NOTICE IS HEREBY GIVEN BY THE undersigned executor of the last will and testament of the above named Pratt, deceased, to the creditors of, and all persons having claims against the said deceased, to exhibit the same with the necessary vouchers, within four months after the first publication of this notice, to the undersigned executor, at the office of Mayer, Gans & Cronlan, Attorneys for said executor, Rooms 40-41 Eagle building, Salt Lake City, in the County of Salt Lake, Utah.

Dated, Sept. 1st, 1897.

JOHN A. SILVER,
Executor.

Executors of the last will and testament of Elizabeth Hoffstetter Pratt, deceased.

Mayer, Gans & Cronlan, Attorneys for Executors.

STRAY POUND NOTICE.

ONE BAY HORSE ABOUT 5 YEARS, 15 hands high, left ear split, brand faint, white spot on forehead.

One Bay Mare, about 12 years, old brand looks like J. Left ear split.

If the above owners do not appear and claim the same before the 1st day of December, 1897, the will be sold at City Estray Pound, Salt Lake City.

JOHN G. MAYNOR, Poundkeeper.

STRAY POUND NOTICE.

ONE RED AND WHITE COW, SHARP Underbit in each ear, brand looks like U or O.

One black and white spotted calf, no ear marks and no brand, left at City Pound the 6th of September, 1897, the will be sold at City Estray Pound, Salt Lake City.

JOHN G. MAYNOR, Poundkeeper.

NOTICE TO CONTRACTORS.

Office of the Board of Public Works, Room 20, City Hall.

Salt Lake City, Nov. 23d, 1897.

SEALED PROPOSALS WILL BE RECEIVED at this office until 7:30 o'clock p. m. of 7th day of December, 1897, for the work of constructing a pipe sewer on the west side of Third East street, between South Temple and First South streets in Sewer District No. 1 of said Salt Lake City. Specifications and drawings to be found in the Engineer's office.

Instructions to bidders, together with specifications and form of contract and bond, can be obtained upon application at the office of the Engineer.

The right is reserved to reject any and all bids.

By order of the Board of Public Works.

C. L. HAYNES, Chairman.

NOTICE.

Pride of Utah Mining company. Principal place of business, Salt Lake City, Utah.

NOTICE.—THERE ARE DELINQUENT upon the following shares of stock on account of assessment levied upon the 21st day of October, 1897, the several amounts set opposite the names of the respective shareholders, viz., as follows:

Name	Certificate	Shares	Amt.
Ben Hager	1	1000	$10
S. T. Baker	3	2000	20
J. Hinckley	4	1000	10
H. T. Sawyer	10	1000	10

and in accordance with law and order of the board of directors made on the 21st day of October, 1897, so many shares of such parcel of said stock as may be necessary for the sale of the aforesaid amounts will be offered for sale at the secretary's office, rooms 47 and 48, Central Block, over Zion's Savings Bank, Salt Lake City, on Wednesday, the 8th day of December, 1897, to the highest bidder for cash, at 2 o'clock p. m., to pay the delinquent assessment, together with the cost of advertising and expenses of sale.

JOHN R. MIDDLETON,
Secretary.

DELINQUENT NOTICE.

The Dalton Gold Mining and Milling Company, a corporation. Principal place of business, Salt Lake City, State of Utah.

NOTICE.—THERE ARE DELINQUENT upon the following shares of stock on account of assessment No. 1, levied on the 6th day of September, 1897, the several amounts set opposite the names of the respective shareholders, as follows:

Name	No. of Certificate.	No. of Shares	
N. H. Waterman	121	100	$2.00
Fred Hoover	522	1000	20.00
Peter Kaiser	601	1000	20.00
Clark L. Hooper	711	1000	20.00
Ed. Hooper	712	500	10.00
Henry A. Walling	814	500	10.00
Isaac Jennings	924	1000	20.00
William Jennings	925	1000	20.00
Harry Atkinson	1027	1000	20.00
J. T. Angus	1171	500	10.00
A. C. Parry	1198	1000	20.00
Harry Hathaway	1199	500	10.00
Hafner & Tripp	1215	500	10.00
R. L. Gibbs	1216	500	10.00
S. I. Cutler	1279	2,000	40.00
L. I. Cutler	1280	2,000	40.00
R. L. Cutler	1281	2,000	40.00
S. L. Coldwell, Trustee	1315	1,000	20.00
S. L. Coldwell, Trustee	1364	500	10.00
Frank Harbison	1394	1000	20.00
Frank Hagan	1395	500	10.00
L. C. Sapp	1397	1000	20.00
Wm. Mapp	1398	500	10.00
W. Hamilton Smith	1400	1000	20.00
J. E. Hoffman	1401	500	10.00
E. W. Smith	1417	500	10.00
C. F. Wallace	1500	1000	20.00
Mrs. Ella Wallace	1501	500	10.00
C. M. Brown	1570	1000	20.00
Mrs. N. Greenwood	1571	500	10.00
Mrs. J. L. Hughes	1572	500	10.00
Mrs. J. L. Hughes	1573	500	10.00
Mrs. J. L. Hughes	1574	500	10.00
Mrs. J. L. Hughes	1575	500	10.00
Mrs. J. L. Hughes	1576	500	10.00
Mrs. J. L. Hughes	1577	500	10.00
Mrs. J. L. Hughes	1578	500	10.00
Dr. Alvah Lewis	1579	500	10.00
Dr. Alvah Lewis	1580	500	10.00

And in accordance with the law and the ordered and lawful order of the board of directors made on many shares of such parcel of said stock as may be necessary for the sale of the aforesaid amounts will be offered for sale at the office of said company, in the Salt Lake City National Bank building, in Salt Lake City, State of Utah, on the 20th day of December, 1897, at the hour of 2 o'clock p. m., to pay delinquent assessment, together with cost of advertising and expenses of sale.

C. M. WILSON, Secretary.

IN THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF UTAH.

Leon B. Goldberg, of San Francisco, California, a citizen of the State of California, an Gertrude Goldberg, of San Francisco, California, a citizen of the State of California, a citizen of the State of California, complainants,

Nathan Tanner, Jr., of Ogden, Utah, a citizen of the state of Utah, and Nathan Tanner, Jr., of Ogden, Utah, administrator in the state of Utah of the estate of Salmon Jacobs, deceased, a citizen of the State of California, complainants,

Nathan Tanner, Jr., of Ogden, Utah, a citizen of the state of Utah, Hyman Goldberg, of Chicago, Illinois, a citizen of the state of Illinois, Isaac Goldberg, of Chicago, Illinois, a citizen of the state of Illinois, Fulgge Goodman, of Chicago, Illinois, a citizen of the state of Illinois, and Nathan Tanner, Jr., of Ogden, Utah, administrator in the state of Utah of the estate of Salmon Jacobs, deceased, a citizen of the state of Utah, defendants.