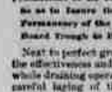
FARM AND GARDEN.

INFORMATION OF PRACTICAL IMPORTANCE TO RURAL READERS.

Precautions to Be Taken in Laying Tiles So as to Insure the Effectiveness and Permanency of the Draining Operation. Board Trough in Detail.

Next to perfect grading of the bottom, the effectiveness and permanency of the whole draining operation depends on the careful laying of the tiles. The work should never be intrusted to a raw hand, unless the latter is endowed with an unusual amount of common sense, skill and intelligence. It is not safe to run the least risk of having this important work slighted. Following the instructions given by T. Greiner in the work just published by William Henry Maple, entitled "How to Make the Garden Pay:"



TILE ON SOFT BOTTOM—TILE ON CLAY BOTTOM.

Laying the tile should follow immediately upon the leveling (grading) of the bottom, and in order to perform this task without stopping into the ditch a six foot pole with a one-quarter inch iron rod fastened to the end and bent in the form of an elbow is used to handle sections after section of tile, and placing it in its proper place. The ends should be closely fitted together, and clay subsoil firmly packed around them to hold them in their place, until the ditches can be filled up again to the top. Fine surface soil or anything that will decay should not be put immediately in contact with the tiles. It is also essential that the point of discharge in the laterals should be a few inches above the level of the main, to insure a good flow. It is obvious that the tiles can be laid directly upon the bottom of the ditch when the subsoil is perfectly hard and solid, especially if of stiff clay. Soft muck or quicksand in the bottom of drains makes it necessary to rest the tiles upon a line of narrow six inch boards, placed in the drain, as here illustrated.

In some instances tile cannot be readily obtained, or least and without paying heavy transportation expenses, and other means of constructing the drain have to be found. I have used board troughs with excellent results. The poorest kind of lumber may be utilized for this purpose. Two boards are nailed together at right angles and held firmly in place by strips nailed diagonally across. Such troughs may be placed directly upon a carefully graded, hard, stiff clay bottom, or upon a line of boards placed upon soft bottom in same way as the tile. Stones and pebbles, where plentiful, can be used to good advantage also, but to get a properly constructed drain with such material the inexperienced owner will always find it safest and cheapest to have the work done by somebody that understands it. Tile is always best, and drains thus made will be of more lasting value. All other drains sooner or later to get choked up after awhile, since it is almost impossible to keep the soil from washing and working among the stones, and finally fill up the throat.

BOARD TROUGH IN BOTTOM OF DRAIN.

But tile drains, if ever so well laid, cannot be expected to last forever, and often they give out quite unexpectedly, making it necessary to take up parts of the line to repair. In an emergency of this kind it is quite convenient to know the exact location of every drain and to be able to find it without having to dig over a large area. A map showing the location of every tile drain put down, with distances marked in rods and feet, will be of great advantage and a valuable assistance sooner or later.

How to Kill Quack Grass.

The following conversation took place at a New York Farmers' Institute:

"What is the best way to kill quack grass?"

R. Van Alstyne—By summer fallowing and not allowing it to grow any all summer, or by putting in hogs enough to root it out. This can be done by fencing off the patch and scattering corn over it to induce the hogs to root.

Col. Curtis—The roots of quack are very sweet and palatable. These make fine food for hogs. Mr. Van Alstyne is right—convert them into pork. It can be done easily. The quack patch is just the place for the little pigs, as they will be active in digging the roots out, and there is nothing better for them, together with grain food, as the roots will make the bulk they require and keep them healthy; besides, they are very fattening. Quack grass has the most value under the ground, and the pigs are the natural factor to utilize it, only give him a chance.

Horse Ties.

The crib bitter may be pitched in his stall by one foreleg in front and the opposite behind, which is preferable to tethering them in the usual way by the neck, or a chain or rope to its hindfoot. The most successful plan for stopping wool sucking is the use of a trap which is buckled round the neck. It must be sufficiently loose to admit of food and water being readily swallowed, but at the same time tight enough to prevent the animal from swelling out its throat in his endeavors to gulp down air. In extreme cases short sharp spikes should be used in the strap. A constant supply of water should be furnished to the stalls of horses addicted to either vice, together with two or three round lumps of rock salt, says Field and Farm.

A Solid Argument.

Student A.—By Jove, what a splendid collection of books you have got here! Still, I bet you never take one of them down from the shelves.

Student B.—Oh, yes, I did this morning.

A.—What did you do with it?

B.—I threw it at the head of an obnoxious coachtor.—Scinia.

The Next Great Novelist.

Where is he? When will he come? The world has waited years, but he does not appear. Or will the next great novelist perhaps be a woman? When George Eliot's literary lamp went out, the last really great English writer of fiction disappeared. We have had none since. Hugh Conway came, but he was a flashlight. Then came Rider Haggard, another flash from the camera, and then darkness. Will Rudyard Kipling be only a will-o'-the-wisp, too?

Come to think, no nation has ever produced more than a dozen great novelists. Tolstoi alone of living writers of fiction can touch the hearts of all men, making them weep, smile or curse, according to their nature and bringing up. Germany has none, France has had none since Victor Hugo. In America there is with a dearth of absorbing stories that now in sheer self defense people are going back to the old masters, Dickens and Thackeray. Even the taste for Ouida has pulled on the popular appetite, we are told by book sellers.

We want a really great novelist, one whose books will outlast at least four generations, one who will wake up all the reader's soul and influence him through his life, who will make him laugh and cry, and wonder and meditate and dream. Shall we ever have such an American novelist?

LIST OF LETTERS.

Remaining in the Post Office at Salt Lake City, Utah, March 19th, 1891, which, if not called for within two weeks, will be sent to the Dead Letter Office at Washington, D. C.

LADIES' LIST.

Miss Mrs Corinne M	Lyons Mrs Ida	
Anderson Ellen	Levy Lizzie	
Allen Mrs J A	Langdale Mrs R G	
Baldwin Mrs Martha	Read Ann A	
Hutchison Miss Vina	McCarron Mary	
Hunt Miss Jessie M	Michael Mrs L H	
Bowers Miss Carlos	Mahlon Bertha	
Bullinger Jennie	Morrow Mrs E	
Carson Eva	Price Miss C	
Carter Miss Emily H	Parker Mary E	
Chapman Josephine	Patterson Ellen	
Chapman Emma	Pond Mrs F S	
Christensen Clemmie	Rose Lillie	
Clarke Ione Jessie	Robbins Lizzie M	
Conner H Hagen	Robinson Margaret	
Dinsdale Emma	Reeder Florence	
Eagan Mrs	Richards Mrs	
Edey Mrs H F	Robertson Marion	
Ferrin Jane	Schultz Mrs A H	
Eden Mrs	Sprague Mrs	
Gibson Mrs	Simmons Mrs G H	
Gaffney Mag	Sarp Mrs T	
Griffin Mrs E	Mary Mrs	
Hall Mrs	Stevens Willie	
Hancock Mrs D	Scanlon Annie	
Hoskins Mrs E A	Scott Fanny	
Hudson Nora	Sayleady Jennie	
Hutchinson Mrs M A	Smith Mrs	
Herrington Blanche	Hunt Nancy	
Hawkins Jessie	Tullis Jennie	
Hoover Cora	Taylor Laura	
Hawley Rua S T	Thacker Mrs J F	
Hoover Tillie	Tower Lizzie	
Jensen Mrs	Upham Ada	
Johnson Mrs	Upham Mrs N J	
Johnson Mrs James	Armstrong Mrs A D	
Johns Mrs	Wilson Mrs E K	
Jones Sarah	Wilson Mrs C	
Jones Mrs	Williams Lizzie	
Little Mrs	Williams Jody	
Lewis Mrs	Wilson Mrs	
Lewis Mrs A	Young Anna	
Lewis Mrs C A	Young Sarah	
Lundgren Mrs John	Wilcox Josie	
Lord Belle		

GENTLEMEN'S LIST.

Allen Mr	Hooker Jas	Rolfe A L
Arthur Henry	Hale	Robertson G S
Armstrong Geo	Hilliard	Rowe A
Allen W	Hallowell J	Rowe Wm
Armstrong	Hanson I L	Rich A
Barlow	Hoover F W	Stevens Carlo
Allen A	Hungerford	Sprague Jos
Anderson Mat	Hall Jas	Smith R
Allen	Heller Harry	Roberts H H
Bennett Jas	Hoover A	Rivers A A
Allen Matthew	Hansen Guy	Rolstad Chas
Bennett Jas	Hoover Jas	Sweeney
Bennett Jas	Hilbert John	Sweeney
Brown Jas	Hilbert John	Sorenson An
Burton Ken	Horton John	Clark
Bennett Jas	Hoover Jas	Stevens A
Bell	Hale John T	Stone Chas
Bell Hans	Hewlett J E	Stevenson Ed
Bailey Frank C	Hunnell J H	Silver Guy
Bell Frank C	Hansen Hans	Stevens W D
Barber Geo	Hansen Jas M	Scott Jas M
Barnes Joe W	Harold Orchard	Smith Chas
Bell Joseph	Hansen Jas	Smith Lloyd
Brown C J	Jones Robert	Smith A
Butler J M	Hanks Jas	Sharp A
Beaty Michael	Hunter W H	Stewart C H
Bailey Marshall	Hunter Jas	Stone Jas E D
Bailey R G	Harris John H	Sorenson Harry S
Burke Peter E	Hoover J	Stone J J
	Hoover Jas H	Spanley John
Bick W	Johnson Jas F	Slater Sam
Beckley Wm	Johnson Jas	Stevens Wm
Brown W J	Johnson Jas N	Sharp A J
Bolton Ralph	Johnson Jas	Stevenson Ed
Campbell Geo	Jones Jas	Sprague E B
Cox	Jones Jas	Sprague E B
Cheney G A	Johnson Jas	Sorenson Dan
Cannon Geo	Johnson Jas	Sell
Cheney Henry	Kappler H W	Schmidtsel J
Campbell J C	Kelsey C C	
Campbell John	Kelsey Jas	Smith H B
Clark J R	Henry	Stanton F J
Clark Jas	Kelsey Jas	Spence A A
Coulter J S	Kimball J M	Thomson Chas
Cannon C J	Kimball Jas	Thomas John
Cannon Geo H	Lord Frank	Tucker M
Cheney W H	Lord	Taylor B
Chetwood C A	Lee	Tracy R
Crandendall	Lindsay Harry	Thompson J C
Cox	Lowrie Isaac	Tullis Jas
Day Chas	Long R B	Taylor H
Day Jesse C C	Lewis Jas	Taylor Geo
Dobbs Chester	Maxwell A	Taylor Henry
Dunlap J L	Hudfines R M	Tobin Martin A
Dobson James	Morgan Chas	Tyson Lewis D
Davey James	Morton Chas	Virgins C P
Dobson Jas	Moore J	Vale Alexander
Debrell N H	McDonald Geo	W W
Dunham S H	McDonald Geo	Woolsey Ar-
Dagan Thos	Moore Geo	thur
Dugdell W H	Mitchelmore	Woodall L S
Emery County	Morris J H	Walters
Eldridge	Mitchell Jas	Wells Thomas
Ewan Al	Nelson M A	Wagner S L
Edwards Geo	Nasmann J	Walsh J
Edwards Jas	Nelson Jas	Wilcox Jas
Bekker Peter	Nelson Jas	Wilcox Jas
Edwards G T	McBrown Jas	Wilk Sam Hy
Ewing Jas	Nelson Jas	Wilk Sam Hy
	Nelson Jas	Wardle Jas
Edwards L D	Nelson Jas	Ward F L
Fisher A W	Porter D S	Wells J T
Fishburn Jas	Pierce	Williams H
Gardner Henry	Pierce	Williams H
Gardner Henry	Pierce J Wm	Young Thos
Gates Henry	Pearson S W	Young S V
Greenwell Sam		

To obtain any of these letters the applicant must call for "Advertised" Letters and give the date of the list.

T. A. BENTON, Postmaster.

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