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PUBLISHED

-+8 SEMI-MONTHLY ₩

fist and 15th of each monti

(lat and 15th of each month)

BY THE PRELPS PUBLISHING CO.

Entered at 1-of file as second class mail matter
TERIMS - 50 cents a var: 25 cents for six months,
payable in advance, clubs of two or more, 35c per
year. New subscriptions can began at any time during the vear. Sample copies free.

RUNEWALS. The date opposite your name on
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CHANGES — Subscribers wishing a change in address must send the old as well as the new address
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ADVERTISING RATES - Eastern or Western
Edition. So cents per gate line each insertion
list in the converse per gate line cach insertion
Discounts for contracts made known on application
FOR THE CONVENIENCE of its patrons farm
and Home has office at:

20 Berthorn St.

SPRINGFIBELD, MASS. CHICAGO, ILL.

27 Worthington St., 204 Bearborn St., SPRINGFIELD, MASS. CHICAGO, ILL. Orders for subscriptions, advertisements, and editorial letters can be sent to either office.

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************ The circulation of Farm and Home for this issue is

300,600 Copies.

Sworn circulation statements on Farm and Home are sent to adver-tisers every three months and are made a part of each and every contract.

forcesses and an All Around the Farm.

TERRACING HILLSIDES.

A great drawback to many farms is the washing away of the soll. But there is a cure for almost everything if the remedy is applied in time. On level land and where the farmer raises only grasses and small grain the soil may be held together by the roots of the crops; on the other hand, where the land is rolling and cropped to cotton, corn, etc, the land is sure to wash if there he no drain to carry water from the field. What is known as the hill-side ditch wail prevent soil from washing very materially, but there are many objections to such ditches. They take up the much space over well with machinery and much labor is required to keep them in repair. grasses and small grain the soil may

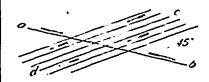
ery and much labor is required to keep them in repair.

The failing terrace does not take a foot of space from cultivation, is easily gone over by any kind of machinery and is easily kept up. I call it a falling terrace because level terraces are used to a considerable extent in some parts of the south. I do not like the level terrace because they have to be made larger to hold the water and crops in wet we there are drowned where the water is held. The failing terrace has a fall of P₂ in to every 13 ft a greater fall will drown the crops. Almost any carpenter can make a level with a span of 13 ft as shown. Fasten a small spirit level on a perpendicular plece.

perpendicular plece which swings loose, being fast-ened by a screw.

an angle of 45 degrees. Suppose a b to be a terrace with a fall of 1½ in and od rows with a fall of 3 or 4 in, the water in rows o d empties up the terrace instead of down, thereby making less strain on terrace a b, for if the rows o d emptied down, the terrace would feel more strain, for the water in rows would be running faster. would be running faster.

The terrace can be made entirely with a plow, although it takes a good many plowings to get the terrace high enough. Hillside ditches can easily be converted hato terraces by plowing in the ditch and making a terrace of the old bank To put terraces on a field where there is nothing to prevent soil from washing. first run off a line with 1½ in fall to



PLAN OF TERRACED AND PLANTED FIELD.

every 13 ft. Take a two-horse plow and make a list where the line was 1 un off and plow on each side of this list 12 ft, for the terrace should have a flat of 12 ft. The first pl-wing will have a very small ridge, but by steady plowing to the ridge a good terrace can be made, although it is always best to have a rain between the plowings to have a rain between the plowings to settle the ground and the soil turns so much better.

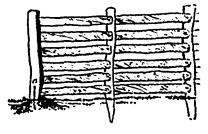
There are other ways of making a terrace, as with plow, shovels and hoes. First plow as stated above, then take the soil from above and below and put on the list, this requires a good deal of labor, although if the manager understands his business a good deal of work can be done in a day. When the terrace is once made there is never needed a hoe or shovel to keep them up for that can be done with the plow. The main thing after all is to have a good flat, not less than 10 ft. We have them on very rolling land and they do remarkably well. The flat can be made better with hoes and shovels when the terrace is first made. If there is not a There are other ways of making a

better with hoes and shovels when the terrace is first made. If there is not a good flat, the land will wash somewhat on the order of a ditch.

As there is no land lost from cultivation by the terraces, they can be put from 10 to 50 yds apart, depending in the slope of the field, for on a hillside they should be put closer together than on more level ground. When breaking up land for a crop, always plow the terraces first with a two-horse plow, then between them with a one or two-horse as desired. When planting a crop in lows, plant over terrace and all; don't regard it so far as planting is concerned, although care should be taken not to let plows cut into the terraces during cultivation.—[P. H. Mangum, Jr, Wake Co, N.C.

POST AND RAIL FENCE.

This fence has six rails to the panel. One post and twelve 20 penny nails make an excellent fence, taking very little space to stand on. The way the



A DURABLE FENCE.

rails are nailed to the posts forms a brace and balances the fence. A fence built of good, durable timber should be good for 20 yrs. Where solld rocks are under posts.

drill a 1% in hole in the rock 6 in deep and bore a hole S in deep in the post. Then get an inch-rod of iron cut, as at which swings loose, being fastcond by a screw.

When the terrace has the proper fall and causes the land to wash. Another important matter is to have the rows of cotton, corn or whatever the crop may be, cross the terrace with a certain angle, never more than 75 degrees.

The illustration shows land terraced at in the cut, 15 in long, drive one cut, as at on the cut, 15 in long, drive one can in the post; set post up with the lower cut of the rod in the hole in the rock, plumb the post, then pour melted sulphur full; keep post still until the sulphur gets cold and you will be surprised at the solidity of your post. Suphur is different from almost anything else; it contracts when heated and expands in the cut, 15 in long, drive one cand in the cut, 15 in long, drive one cand in the post; set post up with the lower cut of the rod in the hole in the rock, plumb the post, then pour melted sulphur gets cold and you will be surprised at the solidity of your post. Suphur is different from almost anything else; it contracts when heated and expands in the cut, 15 in long, drive one cand in the cut, 15 in long, drive one can in the cut, 15 in the hole around the lower can of the cut, 15 in the hole around the lower can of the cut, 15 in long, drive in the hole around the lower can of the cut, 15 in long, drive

when cooled, therefore is better for the purpose mentioned than anything else known.-[W. A. Sharp, Greenbrier

THE FARM GASOLINE ENGINE

Radical improvements the past 10 yrs have so simplified the gasoline engine that it can be readily handled by the farmer for many purposes. For do-mestic and household work, farm and market garden hands, dairymen and many who do not feel themselves com-potent to handle machinery, the neat little gasoline engine comes as a great boon. Readily geared to run a grain crusher or grinder, cut ensilage, pulp roots, pump water, operate a cream sepanator or churn, saw wood or perform other similar work, the man operating a large farm can hardly afford to be without a power machine of this kind. Placed on a stone boat, it can be transported anywhere.

In the craciling opering will be found.

In the gasoline engine will be found simplicity and ease of management, comparative lightness and portability, low first cost and running expenses, freedom from danger of fire or explosion, prompt service at all times, automatic working, so as to avoid the necessity of standing by to fire up, convenient and easily handled fuel, small water supply and no danger of freezing in cold weather. While an engine of this kind, say 4 or 5 horse power, costs \$250 complete, it costs all told not more than 2c per h p per hour, when either 1 or 5 h p is used.

A RABBIT-CATCHING DEVICE.

simple, easily made and sure-catch rabbit device is made by nailing together two 6-in boards in shape of letter V. Use boards 10 ft long. Dig a shallow



CATCHING A BUNNY.

rench just deep enough to place the trough in. Place the trough in trench trough in. Place the trough in trench inverted, as illustrated, and cover with dirt. When the rabbit enters the trap, take a small pole and push him out into a sack which should be so placed as to cover one end of the trough. The opposite or entering end should be banked over in part to make an attractive entrance and not left exposed as shown in the cut to more completely show the trough.—IA. E. Tinstman, De Kalb Co, Ind.

DETECTING THE HESSIAN FLY.

The Hessian fly may be found in wheat at this time of year without difficulty, particularly if the wheat is badly infested. The larva of the Hes-sian fly may be found in the young plant when not more than three leaves plant when not more than three leaves have appeared. Very soon after the egg hatches the young plant assumes a somewhat abnormal appearance. Of course it would require a trained eye to letect the infested plants so early in the season, yet the close observer will be able to pick out the plants which are infested with the Hessian fly when the larva is not more than ½ inch in length. This may be when the wheat has not more than three leaves. From this time until the fly emerges in the spring, the Hessian fly may be found at the base of and on the inside of the outer leaf sheaths. leaf sheaths.

base of and on the inside of the outer leaf sheaths.

The young larva is found it.side of the sheath of the outer leaves. It feeds in this position and finally transforms to the pupa, or what is popularly known as the flaxseed stage, in which it ordinarily passes the winter. In the spring the adult fly comes forth and proceeds to lay eggs on the leaves farther from the root. During the winter the fly, in the pupa form, appears and very much resembles flaxseed in form and size, and the color is not unlike that of flaxseed and is glossy, which has given it the popular name of flaxseed stage.

The eggs in turn hatch and the larvae, feeding on the substance of the stalk, weaken it and cause it to lodge, particularly at times of storms and heavy wind. Individual stalks break over and cause what is known in some

the pupa form, appears and very much resembles flaxseed in form and size, and the color is not unlike that of flax-seed and is glossy, which has given it the popular name of flaxseed stage.

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parts of the country as "crinklei" wheat. Oats and barley are also infested to the this pest. The writer his found as high as 14 larvae on one stake

fount as high as 14 larvae on one stake of barrey.

It has been asserted that late sowing will prevent the ravages of this insect. While this may be true, yet the soming, in order to entirely circumvent the pest, would necessarily be so late that the chances for a maximum crop yield would be materially lessened. Sowing wheat at the latitude of State College, Pa, Sept 20, would not prevent ravages of this pest. While moderately late sowing will undoubtedly afford a means of keeping this insect somewhat in check, yet it should not be practiced with the thought of entirely preventing it. Moderately late sowing, thorough tillage and keeping the largest returns—[Prof G. C. Watson, Pa Exper Sta.

To Burn Lime from limestone, dig : pit in a hillside 10 ft wide, 16 ft long and build walls 3 ft high on each side and build walls 3 ft high on each side of brick or sandstone, and then fill this space with wood between the walls and round it up in the center like an arch. On this build the limestone rocks so as to form an arch to brace itself. When the wood burns out replace with other wood and keep up a regular heat day and night from 4 to 7 days, or until the lime will slake readily in water. The size of the pit can be made larger or smaller to suit the wants of the builder. To burn a large quantity, grate bar To burn a large quantity, grate ban across a furnace are best.—[W. A.

The Grange is prospering wenderfully with 109 new granges organized from Oct 1. '99 to April 1, and 39 old granges reorganized. Last year only about half that number were organ-ized in the same length of time.

The Bees should now be on their rummer stands, those low in stores being fed to build up the colonies good and strong. A good idea is to have ertra hives clean and ready, so that the first bright, warm day the bees can be transferred into a clean and sweet hive, giving them a fresh start in the new year and saving the time taken by them to clean out the old hive. Don't forget to sow some alsike clover with the medium red clover this month. It makes food for the bees and increases the hay crop very nearly one-half, besides having a far better grade of clover hay. A good way is to mix to every 8 dis of red clover 2 qts of alsike.—[J. H. Denyer, Northampton Co, Pa. rummer stands, those low in stores be-

CHAT WITH THE EDITOR

J A M · Vermont , maple sugar is handled by the Vermont maple sugar market. V. I. Spear, mgr. Randolph, V.—S. J. N.: Broom corn seed is sold by ... Vermont y all seeds men advertising in F. & H located in the central states.—N. M.: William Fyfe of Clinton, Mass, sells Canada wood ashes.—C. D.: For information concerning the Chadbourn (N. C) colony, write to Senator J. A. Brown, Chadbourn, N. C.—A. L. J.: The Distributors' league operates in New York city. We have endeavored to learn something about them but without success and cannot vouch for them.

....OUR NEW....

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cation.

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Now is the time to get up clubs, and by doing a little work for Farm and Home you may seems one or