

The Handy Mechanic.

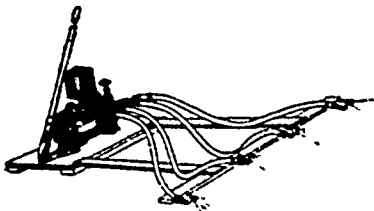
USES OF A PORTABLE PUMP.

A portable force pump is often a great convenience to the farmer. The illustration portrays a simply constructed pump, yet one that may be



THE FORCE PUMP IN SPRAYING.

used for a multitude of purposes. First, most, for spraying. It has great value. Make a solid platform, large enough to hold a barrel and the pump, fasten both securely and place in wagon or on stone boat. The pump, illustrated, has brass cylinder and brass valves and is not liable to get out of order. In spraying,

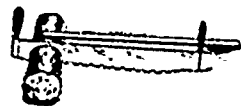


SPRAYING ROOTS WITH PORTABLE PUMP.

one, two or more hose may be attached to the pump, and trees of any size drenched. The pump will do effective work, as it is capable of testing a boiler up to 260 lbs to the square inch.

The smaller illustration shows the pump with attachments for spraying a potato field. It is mounted in a wagon as for spraying fruit. Several rows are covered at each trip through the field. This style of pump may also be connected with a water pipe, and a heavy pressure can be secured it will force or clean out any clogging material in pipes. A solid stream for washing wagons or windows or for filling water tanks can be made. Changes for these various purposes are easily made.

To Prevent Wabbling place one end of a straight smooth stick 1x2 in and 8 ft on log



The saw will move so the handle will follow close to the stick. In starting the saw, lean it to the right or left to suit any incline of timber, making a straight cut but with any variation in gravitation up to 45 degrees. In this manner a thin, two-man saw can be successfully run by one man, although the timber to be sawed may be 45 degrees higher at one end than the other [A. Byers, Texas Co., Mo.]

Green Foods—Kale, cabbage, rape and crimson clover are all good for fowls. It is not too late to get them started.

The fruit obtained from the home garden is so much superior to that obtained in markets it is worth a great effort and considerable annoyance to have on one's table an abundance of such choice, fresh, ripe fruit.

Plants and Flowers.

DAHLIAS IN THE WEST.

In many parts of the west, dahlias cannot be raised successfully on account of hot, dry seasons. For years their cultivation was almost given up in this section, but finally people began to raise them in tubs, so they could be kept constantly moist at the roots and be easily moved to a shaded situation in the hottest weather. Those who raise them in the open ground can only do so by building a frame over them, which is covered with cloth to protect them from the sun.

When the tubs are started, strong ones are selected for the tubs, but one shoot being allowed to grow, when a high, the top is pinched out to cause branching and the pinching is kept up until the plant is a perfect tree in form. It is then allowed to grow naturally and buds soon appear. The earth used is good mellow loam with the addition of a little well-rotted manure. Only an ordinary healthy growth is desired and if too much fertilizer is used it causes a rank growth that cannot withstand strong winds. Once a month additional fertilizer is provided in the form of liquid manure; a heavy mulch of manure will also be found beneficial when the weather becomes hot and dry. A shower bath every evening is a necessity to keep the plants healthy. The tubs can be set on a sunny porch just before time for frost, and by a little care in covering at night, they blossom until severe weather comes.—[Marion Meade, Ill.]

Rambler Roses are undoubtedly one of the most popular sorts now being planted. They are of crimson, yellow, pink or white varieties, but the crimson is more generally planted. They are suitable for planting around buildings, in the flower garden, or to be used as single specimen plants on the lawn. They can be trained as the best and most beautiful of climbers; as a shrub or as a dwarf bloomer. Some are successful with their propagation in pots. Coming into bloom just after the great bulk of June bloomers are gone, the great masses of small flowers give the vine or bush a most handsome appearance. The leaves are thick and leathery, so are not attacked by slugs. Some plants make a growth of 10 to 15 ft in a season.

Weeds Growing In Gravel Walks cause much trouble but walks can be treated so that weeds or grass will not grow in them. Use a solution of blue vitriol about 20 lbs in 45 to 50 gals water. The vitriol is dissolved by placing it in a burlap bag and hanging it in the water. The solution is used in an ordinary sprinkling can, being used freely on the walks. It can be applied at any time.—[Marion Meade, Ill.]

Second Crop Lilacs—Before Aug 15 strip all the leaves from a few of the strongest in the branches. After a few days new leaves will begin to grow and in a short time these branches will bloom as freely in spring. If the season is dry, water the roots copiously. Do not look for flowers on these branches next spring, as the fall blossoms are the ones intended for spring. [W.]

Plant Freesias Early—Freesias must be planted early to do well, in Aug if possible, as they need a long season of growth before blooming. Plunge pots in the ground in a shady place until frost, then remove to a sunny window or well protected cold frame. Mulch the soil in the pot with rotten manure and give plenty of water when plants are blooming.—[Lena Holmes.]

Easter Lilies must be planted as early as they can be obtained, as they require 6 mos growth before blooming in an ordinary window. Fill an 8-in pot half full of sandy soil with plenty of drainage material, set the bulb on it and barely cover with soil. Water well and set it in a partially shaded place, gradually filling up the pot as the stalk grows. Bring to sunlight when well rooted, and when buds appear give liquid fertilizer and mulch the soil with moss or leaves.—[Mrs H. M. W.]

The Apiary.

CATERING TO RETAIL TRADE.

When I began honey making, many visited my farm to see the apiary and incidentally buy a little. I fixed my price at 15c p lb. Not wanting a case holding either six or a dozen sections, and as seven sections at 15c came to \$1, I made some cases especially to sell to visitors at \$1 each. Its inside measurements are 4 1/2 x 4 1/2 x 13 in. As it is made of 1/2 in wood, the outside dimensions are about an inch more each way. This box allows a cushion of old newspaper at the bottom, on which go seven sections. This leaves about an inch to spare, which is taken up by a follower of wood 4 1/2 x 4 1/2 x 1/2 in, and a wedge of single, pieces of broken section, or something similar, keeping all tight and firm, then the top is nailed on with four brads. This box is the roughest of the rough. The edges of the boards are not planed. I started to do so, but soon came to the conclusion that it was mere labor wasted. The box is neat, solid and of a handy size. Any boy round a farm who knows the use of saw, square and hammer can go on making them until further orders.—[Gilbert Wittle, Vaudreuil Co, Que.]

Artificial Foundations—The custom is to furnish bees a small piece of wax as a starter, upon which they build. It has been a mooted question whether the bees used this wax to extend the comb; whether they used the foundation to build cell walls, or left the foundation as furnished them. Prof Gillette of the Col exper sta ingeniously used wax colored by lampblack, and could thus trace the changes made by the bees. They had no prejudice to the color, and worked with the wax freely. It is found that the wax in the foundation is used to extend both the size of the comb and also to start the cells. It is found that no matter how much wax is given in the foundation the bees add to it, and except with the extreme lightest foundation, the resulting comb is heavier than the natural comb. In the case of too light foundations, the bees strengthen it, and make the comb heavier than if just right. Wax foundations seem to be given with the best economy when the foundation is the natural thickness and when there is but a small amount of wax in the cell walls.

Honey should be kept in a warm, dry place such as a shelf or cupboard in the kitchen; never in the cellar or icehouse.

All well-filled sections of light honey placed in boxes for sale, sections nearly filled use at home, the rest should be strained.

About 1 lb of wax is required for every 25 lbs honey stored in comb.

The National beekeepers' convention meets at Chicago, Aug 28-30. Only a paper will be read at a session. Discussions questions and answers will occupy the balance of the time.

Rye and Corn—One of my neighbors has been in the habit of sowing rye in corn and pasturing the rye with sheep. He plows the rye under about May 15 and plants in corn again. One field he treated this way for 13 yrs, taking off 13 corn crops in succession. At the end of the time the field seemed as fertile as when he began. The corn crop is our money crop in Ind. If we can keep a succession of corn crops on the same ground we will make more money by far. Another thing I noticed, he raised the biggest lambs in the country. The ewes being on the rye gave a large flow of milk.—[W. L. Anderson, Montgomery Co, Ind.]

Wire Fences Cheaper—Early in July prices on all wire fences were materially reduced. This is now made possible by the Page Woven Wire Fence Co of Adrian, Mich. From the fact that its new furnaces and mills are in operation and arrangements made for manufacturing all small bits of wire into nails, staples, etc. The annealing and galvanizing processes of this firm are superintended by careful and skilled workmen and the very best galvanized wire only is made and put into fencing material. The catalog of this reliable firm is interesting and free to our readers.

Forestry Problems.

BUSINESS POINTS IN FORESTRY.

The N Y forest preserve is to be cared for by forestry experts on scientific principles, as affecting the perpetuation of the forest and the economical cutting of timber. The investigation of the forest from the forester's point of view is to cover the stand of timber, the reproduction of the more important kinds of trees, and the extent and distribution of the forest types. It will thus ascertain what there is now or the ground, a matter of which there are no records, except those on the tax rolls, for any part of the preserve. Furthermore, it will be the basis upon which the regulations under which lumbering is to be carried on will be formulated. These regulations will insure against damage to the forest as a whole by providing for the perpetuation or increase of commercially valuable trees, and for the production in the shortest time of a second marketable crop wherever lumbering takes place. This can be accomplished without serious loss to the immediate returns in money.

The study of the possibilities for conservative and businesslike lumbering will require a complete familiarity with the conditions of transport by water and rail, with the marketable stand of the timber in amount, quality and distribution, and with the state of the market. In short, a knowledge of the entire situation from the lumberman's point of view and of the most economical and profitable methods of marketing the timber. Not only this, but the water supply of the great Adirondack region which supplies the Hudson river and several canals, is to be measured, investigated and its loss computed.

The Winchester Repeating Arms Co of New Haven, Ct, will send free to any and every reader of F & H, simply by mailing a postal card to them, one of their 160-page illustrated catalogs describing all the guns and ammunition they make. This catalog is handsomely gotten out and should be in the hands of all of our readers who are interested in anything of this kind.

ROUND SILOS

LABOR 1-2 SAVED.



Also best Horse-power, Thresher, Clover-huller, Dog-power, Rye Thresher and Binder, Fanning-mill, Feed-mill, Saw-machine (circular and drag), Land-clearer, Steam-engine, Builage and fodder-cutter, Shredder, Root-cutter and Corn-sheller.

GEO. D. HARDER, Manufacturer, Cobleskill, N. Y.

Please tell what you wish to purchase.



GOOD CIDER
Clear, Pure, Long Keeping Cider, and more of it from the small amount of apples can only be secured by using
A HYDRAULIC CIDER PRESS.
Made in various sizes, and of good power. The only press awarded medals and diploma at world's fair. Catalogue and price list sent free upon request. My dwelling, Fresno, Calif., 5 Main St., Mt. Gilboa, Ohio.

EYESIGHT RESTORED

Failing Eyesight, Cataracts or Blindness Cured without the use of the knife.

Dr. W. O. Coffey, the noted eye specialist of Des Moines, Iowa, has perfected a mild treatment by which anyone suffering from failing eyesight, cataracts, blindness or any disease of the eyes can cure themselves at home. 13,000 sufferers in all parts of the country were cured last year by his wonderful absorption method. Judge George Edmunds, a leading attorney of Carthage, Mo., 79 years old, was cured of cataracts on both eyes.

W. O. COFFEY, M. D.

Aurora, Neb., 77 years old, had cataracts on both eyes and Dr. Coffey's remedies restored her to perfect eyesight. If you are afflicted with any eye trouble write to Dr. Coffey and tell him all about it. He will then tell you just what he can do. He will also send you Free a charge his 60 page book, "The New System of Treating Diseases of the Eye." It is full of interesting and valuable information. All cures are permanent. Write today for yourself or friend to
W. O. COFFEY, M. D., 311 Good Block, Des Moines, Ia.