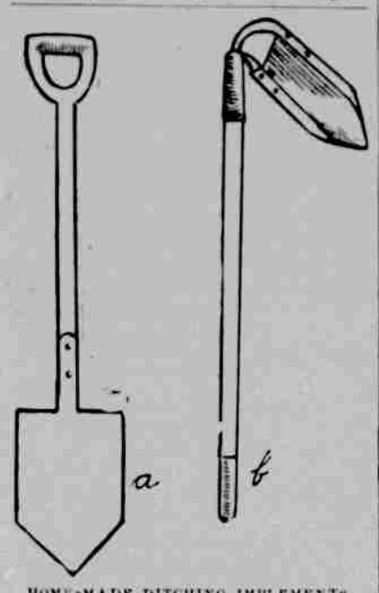
TIMELY FARM TOPICS.

MANAGEMENT OF THE FARM, GARDEN AND STABLE.

Hints on Cutting the Corn Crop—Ingenious Fountain for Poultry—Home-Made Tile Ditching Implements—Good Support for Sweet Peas.

Home-Made Drainage Tools.

Much more tile draining could be done if the farmer was only convinced that it is not a very difficult job and beyond his ability. We have laid all our tile for years and have been very successful. Good tools are of course absolutely necessary, but not expen-



HOME-MADE DITCHING IMPLEMENTS.

sive. Buy a good 18-inch spade. I prefer one with square corners. The remainder of our tools are home-made. A sod cutter shown at a is desirable. Ours was made from an old pointed shovel, as was also the scoop b, for cleaning the bottom of the ditch. By the aid of a blacksmith these were easily converted into very useful implements. To make the cutter, heat and hammer the shovel perfectly flat, then with a cold chisel cut out the desired shape. Sharpen the edge, insert the handle and it is complete. For the cleaner, turn up the edges and cut off the corners, making it about five inches wide. Rivet two quarter-inch rods to the sides. Weld the outer ends and drive them into the handle.—W. I. Moyle in Farm and Home.

Cutting the Corn Crop.

After the cutters are well sharpened, strike into the corn fields, each man taking two rows. When properly planted, each hill should have three or four plants. The stalks being of even height, the tops of a hill may be grasped in the left hand and the plants cut as near the ground as possible with the corn cutter in the right hand. When the first hill is cut move the corn to the new hill, grasping the tops of the eight plants in the left hand and cutting. These may then be dropped between the rows and six hills more cut in the same way and dropped with the first handful, butts together. After cutting through a row and returning, each man may take a bundle of dampened straw and tie the bundles he cut. This done, every sixteenth bundle in the eighth and ninth rows is set up against the other nearly erect, one to the north, the other to the south. The two nearest bundles are then placed against these two already set, one to the east, the other to the west. The nucleus of a stook is now made. The bundles are then set evenly around the stook and the tops tightly tied with strong, thick bands of straw. After the stalks are well seasoned the bands may be removed, the corn husked, the stalks stored in the barn and the corn dumped in the bins. When husking it is an economical plan to dump each basket of corn as husked into a wagon which should be emptied each night into the corn crib.

Support for Sweet Peas.

The ordinary method of using bushes for this purpose is unsightly, while the sharp sticks wound the hands when gathering the blossoms. Light posts can be used for the support figured, 1¼

SWEET PEA TRELLIS.

inch square being about enough, while light wires only are needed to string it. With such a support the plants will do their best, as they will be held up from the ground, where they can have air and sunlight.

Easy to Raise Bees.

It is a matter of wonderment to me why so few farmers keep bees, when the facility with which they may be handled and freedom from danger of stings (which no doubt used to deter many from keeping bees) is now done away with, since the invention of the bee veil or face protector, rubber gloves, etc., which go to make up the outfit of one engaged in the raising of bees. It is advisable to buy colonies of bees in the spring, says Mrs. McPherson in the Ohio Farmer, especially for a novice, although they are generally cheaper in the fall. But one not accustomed to them would not know whether they were in good trim to winter successfully, or would not know what to do in case they were not.

Perfect wintering has very seldom been accomplished, yet our best beekeepers assert that it is no more difficult to winter fifty colonies of bees than a corresponding number of sheep.

We would advise getting the Italians, as they are not so vindictive as the blacks or hybrids. If you are fearless get any strain that your purse will allow, although very high prices are asked for some strains. I think, though, that the honey which is gathered and stored by the blacks or hybrids is as sweet and the quantity as great as that made by the high-priced kind. But all beekeepers of note allow that "no bee builds such delicate comb or caps the honey with such virgin whiteness as the poor, despised black bee." Buy bees as near home as possible, as they cannot be shipped as freight, but only by express. Buy full, strong colonies, and if in the spring, have them come when the apple trees are in bloom; never move them until warm weather and the blossoms are out. The "Chaff" or "Simplicity" hive is recommended.

Forcing Apple Trees to Bear Yearly.

The question with myself and neighbors is why I have forty or more apple trees in full bearing and they have none to speak of. I do not pretend to be entitled to any special favors, says Z. Breed, in the New England Farmer, but I have "been thinking." I have been in the practice, more or less, of fertilizing and mulching trees that were in bearing. Suddenly I was getting a crop of odd years, especially of fall and early winter apples. One or two Baldwin trees followed suit, and I conclude that the treatment I gave the trees enabled them to grow the crop and grow blossom buds for another year.

I have also practiced thinning my fruit. Am doing it at the present time. I have fertilized and mulched a couple of trees that are in full bearing now to see if it will affect the crop another year. I hope others will try the same experiment and report results.

A Unique Fountain.

Instead of placing open earthenware pans in the yard and filling them with water for the fowls to drink, suppose you try the arrangement here illustrated. Against the fence or a wall fasten in a suitable manner a champagne bottle filled with water and turned upside down. Let the neck of the bottle come within, say, half an inch of touching the bottom of an earthenware platter, or, better still, let it reach half way from the rim of the platter to the bottom. Of course, some of the water will run out of the bottle, which is what you desire, but when the surface of the water reaches the neck of the bottle the flow will stop. As the fowls drink, the surface of the water is lowered, of course, but fresh air enters the bottle and more water comes down, thus keeping the water in the platter at a uniform depth.

Fix one or more of these fountains in

POULTRY FOUNTAIN.

the shade at convenient places, and you will add very much to the comfort of your fowls.

Rival of the Silkworm.

A new kind of caterpillar appeared in Bismarck, N. D., and the region thereabout recently, and began to denude the shade trees of foliage, after the manner of the pests that have lately afflicted this city and vicinity. Some one noticed that the worm spun a cocoon of unusually strong texture and a citizen sent a cocoon to a friend in the East, who owns a silk-weaving mill. The silk weaver reported to the Bismarck man that the thread in the cocoon was almost as strong as silk and of similar texture, and that if he had a handful of cocoons, he would weave a handkerchief from them. Specimens of the worms and of the cocoons have been sent to Washington for the report of the Government experts, and the North Dakotans are thinking that perhaps what they took to be a pest is a valuable gift from nature.—San Francisco Bulletin.

Yarding Cows at Night.

It is one of the disadvantages of pasturing that it necessitates getting the cows at night in a yard for milking where they are usually left until morning without feed. If cows could have their way they would do most of their grazing at night, while the air is cool, only lying down when they had filled themselves. It will pay to cut some grass for the cows put up in the yard, and when this is done the effect of increased yield will induce the farmer to stable his cows during the heat of the day, and provide green food for them. At night the cows might be allowed to run in some pasture near the barn, putting them up in the morning. Only a feed at noon and night would then be required.

Root Pruning Fruit Trees.

There is a wide difference in the effect of cutting the roots of trees by plowing or cultivating. It varies with the time of year and the condition of growth above ground. While the tree is dormant, plowing or digging so as to destroy the tree roots does comparatively little injury, and roots put out in time to furnish sap for the buds and growth is uninterrupted; but the check to growth while the tree is in full leaf is much more serious. That if not severe enough to kill the tree will almost always set it to forming fruit buds, and a good crop next season will be the result.

About two thousand soldiers are discharged yearly from the English army for bad conduct.

NOTES ON EDUCATION.

MATTERS OF INTEREST TO PUPIL AND TEACHER.

Five English Women Study Our Women's Schools—The Real Value of Teaching—Visitors and Visiting—Machinery One of the Best Educators

American and Foreign Schools.

Five women teachers were sent from England to this country to study and report upon secondary schools for girls and institutions for the training of women. Their reports have been published by Macmillan and are well worth careful reading. The authors, says the Philadelphia Ledger, were chosen as representatives of the best training of expert teachers in England and were therefore fully alive to the differences of the advantages and disadvantages of the American schools and those of that country. Each took a special subject and made a report on it, and together they enable us to see just how our schools look in the eyes of English teachers. Some of the matters described are, of course, familiar enough here—for instance, that we have no national school system, such as exists abroad, but that education is a matter left altogether to the States, though there is a certain amount of uniformity in our schools, less, perhaps, than that enforced by central authority in Great Britain, France, Germany and Switzerland. One of these watchful observers lays stress on the systematic cultivation of the spirit of nationality fostered by national holidays and on the admirable order and discipline that result from the freedom of behavior in school hours. Co-education is said to give girls more dignity, quiet and self-possession, and to boys a wholesome restraint in their manners. The splendid provision made for our public schools in buildings and equipment of course calls forth praise from these watchful observers. The private schools in this country are reported to educate about one-twelfth the school population, and to be as good as any in the world. In our primary schools history of the United States is taught much better than English history in schools of the same grade abroad. American schools make more use of oral work, blackboards, maps, pictures, models; scientific collections are necessities in America, luxuries in England. School libraries, laboratories, studios, gymnasiums are found here and not abroad. The American pupils have more self-reliance and a greater love of knowledge for its own sake than for the prizes which are made such an important part of all English school work. One of the ladies who made this inspection thinks that not sufficient attention is given here to the development of the individual talents of a particular boy or girl, and that although ample provision is made for indoor gymnastics in girls' schools there is almost complete neglect of outdoor games and recreations.

The training of teachers naturally receives much attention in these useful little reports, especially so because England and America have both made great advances in the past few years, yet each country has gone to work in its own way, ignoring and neglecting hitherto any comparison with the methods of the other.

The simple, matter of fact, expert way in which these five English women have studied our schools is of itself the best proof that they have found them well worth praise.

Machinery as an Educator.

In looking at a complex piece of machinery, such as the great triple-expansion engines of a high speed modern ocean racer, the first feeling of the uninstructed layman is apt to be that of confused awe. The huge mechanism appears to him as a leviathan, a great brute force, trained by man and under his control, but yet ready to strike down ruthlessly anyone who shall get in its way. Education is about the last function that one feels ready to attribute to it. Yet in the Engineering Magazine, Alexander E. Outerbridge, Jr., tells us that a machine is a great educator, and he ranks its work in this line as of a very high grade.

His ideas, which are worthy of careful attention, are given in the following extracts which the Literary Digest quotes from his article.

"An impression prevails in the minds of many intelligent people, more especially, perhaps, among those who are not directly engaged in mechanical pursuits, that the tendency of modern methods of manufacture in the substitution of macinery for hand labor is detrimental to the intellectual development of the wage earner, in that it makes him an automaton, like the machine which he tends; that the workman in a great factory loses his individuality; that the handicraftsman of a former generation has disappeared; and that his successor is a mere marionette, to whom the gift of brains is a superfluity.

"It is the object of this paper to present briefly a different and, in some respects, a novel view of the educational influence that machinery exerts upon the mental and moral development of the workingman, and to show that the introduction of new inventions, so far from being an oppression to the wage earner, is, in fact, his greatest boon. These conclusions, which are the result of daily observation for a number of years in a large industrial works, are at a variance with the opinions of those theorists and economic writers who maintain that mechanical ocupation is necessarily narrowing to the intellect.

"I am satisfied that an insensate machine, in the material combinations of which, however, the skilled designer has embodied his own mental faculties, so that it is constrained to do his will when power is applied, performing accurately the most complex operations, exerts a stimulating influence upon the care-tender, even though he may be an illiterate man or a boy entirely unconscious of this influence. If you give a boy of average capacity the simplest routine work to do in connection with a machine—it may be merely to feed it with raw material—he will at first, perhaps, perform his task in a perfunctory manner, taking little interest in the work and having no comprehension of the mechanism of the machine. Little by little, however, the constant repetition of mechanical movements, producing always one uniform result, impresses itself upon his latent powers of observation and comprehension, the underlying principles and heretofore hidden motive of the seemingly inexplicable combination of wheels and gears is revealed, and simple order is evolved out of complexity; a new interest is developed and the boy becomes an intelligent operator. The educational influence of mechanical occupation upon the workingman is strikingly illustrated in another manner. You will find in all large industrial establishments employes who exhibit as much skill in their special work as that of well known original scientific investigators; they are daily performing operations as delicate in their way as the work of the microscopist, and with a degree of accuracy amazing to the novice. Take, for example, the simplest operation of calipering a tube or measuring a rod, and you will find mechanics dealing quantitatively with minute fractions of an inch which ordinary people totally disregard."

That all this close relationship between machine and operator has its educational value no one can doubt. But Mr. Outerbridge goes farther, and pursues his subject into a realm that harsh critics might be tempted to call that of fancy. A machine, he says, is in a certain sense the representative of the human mind that conceived it. He states this as follows:

"I believe that every novel machine possesses something of the personality of its creator. I believe, furthermore, that is is possible to trace through the machine, back to the inventor, a positive and continuing influence of his mind upon the mind of the operator.

"I believe that the special mental development of the present generation of American engineers and mechanics may also be traced through historical relics to the subtle quality of mind with which famous American inventors have endowed their creations. These forces have been silently working to mould the minds of men in characteristic grooves, so that is is impossible to mistake a purely American machine for a foreign production as it is to mistake a Chinaman for an Indian. This characterization may be even more sharply defined. It is not an unusual observation among mechanical experts to-day that machines produced by one establishment may often be distinguished from similar machines of another make (without the aid of any name plate) through a peculiar 'something' which the Frenchman expresses with a shrug and 'Je ne sais quoi.'"

Commit This to Memory.

The value of your teaching is not the information you have put into the mind, but the interest you have awakened. If the heart is trained, the rest grows out of it. Interest the heart, the feelings, the emotions, for they are fundamental facts. The mind is evolved out of heartiness. People do not have mind worth thinking of unless they have capacity for sensitiveness. The characters of great men prove this. Whether in picture or in prose, we are always coming up against the fact that it is enthusiasm that governs the world. We have not realized the educational possibility of it. Of all things in the world love is the most educable, the most plastic; it can entwine itself about the lowest and most indecent things in the world and spend its energies there, or climb the heavenly ladder, as Plato said, and identify itself with all that is most worthy, most precious and most lovely.—Dr. G. Stanley Hall.

College Graduates.

If college graduates are put directly into teaching without special duty or training, they will teach as they have been taught. The methods of college professors are not in all cases the best, and if they were, high school pupils are not to be taught or disciplined as college students are. High school teaching and discipline can be that of neither the grammar school nor the college, but is sui generis. To recognize this and the special difference is vital to success. This recognition comes only from much experience, at great loss and partial failure, or by happy intuition not usually to be expected, or by definite instruction and directed practice. Success in teaching depends upon conformity to principles, and these principles are not a part of the mental equipment of every educated person.—From Report Committee of Fifteen.

Visitors and Visiting.

Visit to learn rather than to criticise.

Don't make the day for visiting schools a holiday.

You can learn something from the poorest school you ever saw.

Don't try to do a season's shopping on the same day you take for visiting.

Go to some town or city where you are sure you will see some good work and up-to-date teaching.

Take notes; you may remember the points you observe for a time, but if you write them you have them to keep.

Don't visit the day after a holiday; it takes one day to recover from a holiday; usually both teachers and scholars are tired after it.

Don't sit in front of blackboard work that children are copying, and don't wait for the teacher to ask you to move. Perhaps she is too busy to notice what the trouble is, but you know, or ought to, by the children's stretching out of their seats to see.

'Liza.

A plain, old-fashioned name, unheard by
me for many years,
But still I see it has the power to ope a
fount of tears;
It calls up, too, the youthful days among
the hazy hills,
Of mornings thrilled by mocking birds, of
nights by whippoorwills;
And somehow even now I think, as often
long ago,
No days have been as sweet as then, when
I was 'Liza's beau.

I'm told her married life was hard and
changed her much at last;
But now she's slumbering well up there,
where all her years were passed.
Forgotten are all wrongs to her in that
unending sleep—
The look unkind, the cold neglect, the
words that made her weep;
But now and then I find myself a-wishing
she could know
One heart is still as true as then, when I
was 'Liza's beau.
—Memphis Commercial-Appeal.

Sympathy.

I had not thought this time a year ago
That shrined to-day within my heart
would be
Such treasures as thy friendship giveth
me;
My skies are bluer in thy light, and so
All beauty, truth, all gracious things
that grow,
I see with clearer vision, knowing thee;
Thy golden being seemeth as the key
To ways wherein I long had yearned
to go.

And as to me thy joys such gladness
bring,
So does thy sorrow wring my heart
with pain!
O dearest heart, I find no voice to sing!
Thy grief is mine, and till it pass again,
I bow my head like silent birds that wing
'Round a bruised blossom burdened by
the rain.
—Evaleen Stein, in Mid-Continent Magazine.

Red Clover.

Robin, atilt on the apple tree,
Singing your love to the waking world,
What is the sweetest thing you see
From the quivering bough with the dew
impearled?
Do you love the golden daisies best,
Or the roses glowing with splendid fire?
What do you tell your mate in the nest
Of the flowers that bloom for your
heart's desire?

Robin, winging across the dell,
That the rippling wind goes swaying
over,
As you dip and rise to the long sea-swell
Of the waves that pass o'er the blush-
red clover,
I think you say to your mate in her nest,
And she, I fancy, chirps back to you,
That the lowliest blooms you both love
best,
While over your brood the sky is blue.
—Harper's Bazar.

Wheat and Clover.

On one side slept the clover,
On one side sprang the wheat,
And I, like a lazy lover,
Knew not which seemed more sweet—
The red caps of the clover
Or the green gowns of the wheat.

The red caps of the clover,
They nodded in the heat,
And as the wind went over
With nimble, flying feet,
It tossed the caps of clover
And stirred the gowns of wheat.

O rare red caps of clover,
O dainty gowns of wheat,
You teach a lazy lover
How in his lady meet
The sweetness of the clover,
The promise of the wheat.
—London Spectator.

The Major's Deer Hunt.

Major Champion, in his book "On the Frontier," describes a deer hunt, in the course of which he found his dog astride the dead body of the deer, while an Indian stood a little way off, bow and arrow in hand. By sign he made the white man understand that he had wounded the deer, and the dog pulled it down. Then he cut up the deer, tied the forehalf of it up in the skin and placed it on one side. The other half he laid at Major Champion's feet, delivering himself of a speech in the Ute language. The white man understood his meaning, but not a word of his address. The Indian and the dog had killed the deer together, and the dog's owner was entitled to half the game.

The major was equal to the emergency. He rose and delivered in full the classical declamation, "My name is Norval," with appropriate gestures, just as he had many times given it at school. Nothing could have been better. The Indian and the white man shook hands with effusion, and each with his share of the venison rode away.

"The thief who broke into my shop last night," said the false-hair merchant, "reminded me very much of a firecracker." "How was that?" asked his friend. "He went off with a bang," sighed the hair merchant.—Harper's Bazar.

Patient—How can I reduce my weight? Doctor—You should have something to do. Something to keep your mind busy, to worry you even. Patient—By the way, you might send your last month's bill in.—Philadelphia Record.

Most people just drag along until it is time for them to die.

Should Patronize Home Beauties.

Americans spend at least $75,000,000 a year in visiting Europe for pleasure and hardly $1,000,000 at our own natural wonders of Niagara, the Yosemite valley, and the Yellowstone Park. Most of the tourists at these home resorts are Europeans. Among the 3,000 visitors to the Yellowstone Park during the last three years only sixty were Americans. It seems to be the opinion of the American that the proper study of mankind is man and not scenery.