Practical Talks and Plain Precepts for Farmers.

Edited for the Farmer readers of the MONITOR by an Annapolis Valley Agriculturist

WATER SUPPLY AND STORAGE IN THE SOIL

Much study has been given to the question of the quantity of water necessary to maintain satisfactory progress and growth of plants. We have seen what large amounts may transpire through the plant during the season, and we have noted the extent to which evaporation may take place from the surface of the soil. During the time the plant is growing, water is being taken out of the soil by both of these means. Many observations have been made as to the extent of the loss in these two directions. American observations indicate that from 234 to 522 tons of water are utilized in these two wgys for each ton of dry substance produced by the crop. It is equivalent to from 2.14 to 4.76 in. in these two ways for each ton of dry matter grown. As the various crops produce from two to five tons of dry matter per acre per year, we see that the possible demands upon the water supply for the proper maintenance of a growing crop may vary from 8 to over 20 inches of water per season or 900 to 2260 tons per acre. Foreign observations substantiate those of American experimenters.

In considering the quantity of water which a soil should contain at the beginningof the growing season, and which should reach it by precipitation during the spring and summer months we should keep in mind certain related facts. It must be recognized, in the first place, that a plant cannot use all the water started in a soil. King,of Wisconsin, states that in the clay soils of his state plants are not able to use the water below 9 per cent,and in sandy soils not below 5 per cent. If, therefore, the upper five feet of a soil contained the generous amount of 2400 tons per acre, or about 21 inches, only about 1468 tons would be available to the plants, provided no evaporation and no percolation were to occur. The loss of water by evaporation is certain, and by percolation probable, so that the available supply of water is reduced below the figures given.

We must remember, in the second place, that if a plant is to grow under the most favorable conditions, the water in the soil should not be reduced below 50 or 60 per cent of the point of saturation. While vegetation may use water below this point, the limitation of the supply places serious limitations upon the thriftiness of the plants. The plant, therefore, not only must use the large quantity of water for growth, but for its best welfare the moisture of the soil ought to be kept up to a generous percentage. It is probable that a clay soil starts in the spring at the point of saturation, and if the rainfall during the growing season which actually percolates the soil to the area where it may be utilized by the roots of growing plants is from 12 to 15 inches, satisfactory plants may be produced. It is seldom, however, that these conditions prevail. A soil does not always become saturated in the spring, especially when a severe dry spell has prevailed the preceding season, and the fall and winter precipitation has been small. Moreover, the rainfall which actually becomes available is often greatly less than 12 inches. For instance, in 1900 only 11.4 inches of rain fell at Geneva during the four months of May, June, July and August; 6½ inches of this fell in July. While the number of precipitations during these four months was large, the quantity of rain which fell at one time was in a majority of instances so small that little or no good was accomplished. Not enough water fell to percolate to the roots of the plants, and in one sense these small precipitations may be said to have done harm, because of compacting and moistening the extreme upper layers of the soil and increasing capillary and thus causing greater evaporation. As we all know, 1900 was not a productive year because of the lack of water, some crops in some localities being almost an entire failure.

We need to consider, therefore, if there are any means by which the supply of water, whether that stored in the soil or that which is precipitated during the growing season, may be conserved for the use of plants.

In considering the means by which we may economize the water used for plants, it should be said that there are few rules for universal application. All that can be done in this connection is to present a few of the important operations or conditions which tend to increase the storage of water in the soil and prevent the evaporation of that which became stored. If there is any universal remedy for a deficiency of soil water it is tillage. If it is desired to use a word of more general significance, we may substitute for tillage the term mulching, because tillage, properly regarded in this connection, is simply providing an earth mulch. The principle which operates in preventing evaporation of water from the soil by tillage has already been explained. It consists, as before stated, in breaking up to a certain depth the fine capillary tubes which in a compact soil extend to the surface and rapidly pump moisture to the point where it may be evaporated through the combined action of the sun and currents of air.

Another, and what may be called a negative or indirect means of conserving soil moisture, is to prevent the use of this moisture by one set of plants when it is desired to retain it as available to another set; as for instance, allowing a crop of grass or grain to utilize the water in an orchard soil which should be saved for the trees.

It is fair to enquire whether experiments justify the statement that tillage conserves moisture. Many investigations along this line have been carried on, and I will mention only one or two as illustrative. King, of Wisconsin, experimenting with soil in pots having a depth of 4 inches caused a saving of from 20 to 72 per cent of the moisture, according to the kind of soil and the conditions under which these pots were located. Hilgard, of California, one of our best authorities along this line, relates an instance where in the case of two apricot growers located side by side on similar soil one cultivated his orchard and the other did not. Investigation showed that in the cultivated orchard the percentage of moisture in the month of July was 6.3 and in the uncultivated orchard the percentage was 4.2. This was equal to a difference per acre of 244 tons of water in the upper six feet of soil, practically all of which would be available to the trees. The effect of this difference in the condition of water supply was seen in the fact that the cultivated trees made a growth of about 3 feet and the uncultivated trees of about 3 inches. Photographs of the fruit of the two orchards showed a difference comparable to the difference in growth.

As bearing upon the influence of growing a crop in an orchard, experimets conducted in an apple orchard in Illinois showed that the percentage of water in the upper 27 inches of the soil where clean cultivation was practised, was 12; in the soil where oats were allowed to grow, 8, and where grass was allowed to grow, 8 per cent. This means a difference in the the cultivated part of the orchard the cultavated part of the orchard and the part where oats or grass were allowed to grow, of 420,000 pounds of water, or 210 tons all of which would be available to the trees. Illustrations of this kind could be multiplied to great number.

Something should be said concerning the character and depth of the earth mulch which is produced by tillage. It should by all means be a perfect mulch through having the upper layer of the earth completely and uniformly stirred. The reverse of this condition often pertains, as is seen when a harrow or cultivator is run over the surface of the ground in a way which simply cuts grooves in the hard soil, and leaves ridges which are not broken up at all. Such cltivation may even do more harm than good, because it renders more compact a part of the surface which is exposed to the air, and also increases the evaporating area. Some form of tool should be used which breaks up and stirs every particle of the upper layer of earth. Probably no fixed rule should be laid down in regard to the depth of cultivation. Experimental work gives conflicting results as to the most desirable depth, just as we should expect. If the soil is thoroughly and frequently stirred to the depth of from two to four inches, the result will in general be satisfactory.

Plowing the land in the fall may exert an important influence upon the storage of water. When the land is broken up into ridges in a loose condition, which greatly increases the capacity for retaining the rain which falls or the snow which melts, thro' the greater looseness and uneven surface of the earth, a larger storage of water is accomplished. On soils needing more water, and where surface drainage is rapid, fall plowing is undoubtedly desirable. Fulton at the Michigan Experimental Station, in comparing the effect of fall plowing vs. spring plowing on the percentage of moisture in the soil during the succeeding season, found a decided advantage in favor of fall plowing. This increased moisture made itself felt in the larger yield of crop on the land plowed in the fall. In very wet soils, where drainage should be encouraged and overwetness is likely to occur, plowing would not be advisable.

The spring of the year finds the surface of the soil frequently compacted, and therefore in condition to lift water from below with the maximum rapidity of which a particular soil is capable. If an uncovered soil is allowed to lie in this compacted condition until late in the season, the loss of water is enormous. This indicates, in a general way, that the cultivation of the soil in the spring should be at the earliest date when this can be done without producing an undesirable mechanical condition because of over wetness. Prof. King of Wisconsin gives instances where comparison has been made between the effect of early and late spring plowing, upon soil moisture. In his book on 'soils' he mentions one instance where a soil plowed April 28 was compared with one plowed May 6; the former was found to contain later in the season over nine inches more water in the upper four feet than the latter, a most important difference. In another experiment performed by Prof. King, one plat of soil was plowed April 12 and another May 12, which resulted in a retention of 420,000 pounds more of water in the upper three feet ofthe early plowed than in the same volume of the later plowed. This is, of course a case where judgment must be exercised as to whether loss of water should be encouraged or niscouraged.

In a season where there is a scarcity of water, one rule should be invariably observed, viz., to cultivate land bearing crops, whether fruit or otherwise, as soon as possible immediately following rain. If enough rain water falls to percolate to the soil region where the roots are feeding, its evaporation should be retarded as fully as possible. Moreover, because the rain compacts the upper surface of the soil and increases the rate of evaporation, this compact condition ought to be immediately broken up. It is realized, of course, that with the pressure which often comes from various kinds of farm work during the busy season it is not always possible to cultivate large areas of soil at the most desirable time.

Subsoiling land has a mixed effect as related to soil moisture. One effect is to increase the percentage capacity of the soil for stored water. A second effect is to decrease the capacity of the soil for conducting water to the surface, or in other words, tends to retard loss of water by evaporation. Still another effect is to decrease the feeding area of the roots of the plants. Without discussing this factor at any great length, it may be said in a general way that the resultant effect of subsoiling is favorable to an increased supply of water to the plant.

The popular notion is that rolling land after sowing seed increases the soil moisture. This is true if we consider only the very upper layers of the soil. It is also true that the sum total of water contained in the upper two or three feet of earth is diminished by rolling, because this operation so compacts the upper stratum that the capillary power of the soil is increased and water is pumped to the surface faster. It should be said, on the other hand, that the compacting of the upper stratum of earth has a favorable effect on the germination of seed. The farmer who covers corn or garden seeds by hand recognizes this fact when he compacts the earth over the seed by giving it a tap with the hoe. We have all noticed that in the early morning the spot which is made compact with the hoe looks moister than the surrounding loose earth.

It is generally understood that when ever the humus of a soil is increased its water-holding capacity is increased So far, then, as water storage is concerned soils which are liable to be deficient in water are greatly benefitted by the liberal application of farm manures, or by the addition of vegetable matter in any other form.

It follows from what has just been said, that when a fruit grower frequently turns under in his orchard heavy cover crops, he increases the water-holding capacity of the soils, because he increases the proportion of humus. This is not the whole story, however. It is undoubtedly possible to defraud an orchard of water thro' the injudicious management of cover crops. If, for instance, an early sown and vigorous growing crop like cow peas matures on the land, and is utilizing water during the late fall weeks when the water should be stored for use during the succeeding season, the crop may, so far as water is concerned, do no positive harm. Again, if a crop sown in the late summer is allowed to take up vigorous growth in the succeeding spring and remains growing on the land up to maturity, possibly as late as the latter part of Mayor early June, much water has been withdrawn from the soil, thereby diminishing the supply which later the trees will sorely need. It should be said, however, that the early turning under of a cover crop probably tends materially to reduce evaporation. The way in which this is accomplished is easy to understand. This crop, when turned under, practically constitutes a mulch below the surface, because it forms a layer of coarse material thro which the moisture from below is transmitted very slowly. If the feeding ground of the roots of plants is below this subterranean mulch, then the result is favorable; if above, the result is unfavorable.

Doubtless some are inclined to ask the question whether deep tillage conserves or wastes soil moisture. No rule can be laid down in this particular. What is desirable in the way of depth of tillege depends very largely upon the character of the soil. The same should be said of flat culture as against hills or ridges. If the soil is deficient in water, flat culture is desirable, because it offers the smallest posible evaporating surface. If water is in excess, then hill culture or ridges is preferred because here the evaporating surface is increased

Hedge rows tends to conserve moisture by diminishing the rapidity of the currents of wind. The more rapidly wind blows over the soil, the more moisture will be evaporated within a unit of time. Soil dries most rapidly during a windy day and less rapidly during a quiet day. It is easy to see from this now a hedge row will diminish the evaporation of moisture from the areas which it protects.—Country Gentleman.

AN OLD LADY'S STORY.

To the Editor of the Monitor:—

Sir,—I was troubled with rheumatism for about eight years, and tried a great many different kinds of medicines without getting relief. Last spring I began to get worse and I could hardly walk. It was then that I tried Dr. Clarke's Wonderful Little Red Pills, and two boxes cured me. I have had no rheumatism since taking them. I am eighty-two years of age, and can walk now quite smartly thanks to this remedy wonder.—(Mrs.) Paul McDonald, Eden Lake, Pictou Co., N. S.

We have yet to know of a single case where these wonderful pills have not been almost entirely successful in affecting a cure, Canada Chemical Co. Peterborough, Ont.

They cured me of rheumatism after I had been given up.—Andrew Closkey, Victoria, B. C.

Ex-Ald. Bailey, St. Johns, writes: I cannot speak too highly of Dr. Clarke's Wonderful Little Red Pills. They worked a miricle in my case and cured me after many years of suffering. I do not think their equal is to be obtained.

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Dr. Clarke's Little Red Pills permanently cured me of headache. I suffered for years and only took two boxes. That is a year since. I have not had a symptom since.—James R. Jackson, Sault Ste. Marie, Ont.

I do not believe there is a medicine to compare with Dr. Clarke's Little Red Pills. They cured me of indigestion and catarrh of the stomach, after nine years' suffering.—H. S. McDonald, G. T. R. shops, Montreal.

Dr. Clarke's Little Red Pills are a certain cure for rheumatism, asthma, paralysis, catarrh, eczema, coughs, backache, indigestion, stomach and liver troubles, female complaints, even when the diseases have been standing for many years. Price 50 cents per box. For sale by local druggists. The Canada Chemical Co., Peterborough, will forfeit $10 for any case that will not be helped by these pills.

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WHAT TO READ.

The person whose opportunities for self improvement have been few, will do well to study the following list:

For clearness read Macaulay.
For logic read Burke and Bacon.
For diction read Homer and Scott.
For consciousness, read Bacon and Pope.
For sublimity of conception, read Milton.
For vivacity, read Stephenson and Kipling.
For imagination, read Shakspere and Job.
For elegance, read Virgil, Milton and Arnold.
For common-sense, read Benjamin Franklin.
For smoothness, read Addison and Hawthorne.
For simplicity, read Burns, Whittier and Bunyan.
For interest in common things, read Jane Austin.
For humor, read Chaucer, Cerventes and Mark Twain.
For study of human nature, read Shakspere and George Eliot.
For loving and patient observation, read Thoreau and Watson.

If she be deficient in history or biography, she will find that Macaulays histories and essays will give her facts in the clearest and most elegant manner. His essays will bear many readings and will repay her for the time. The essays of Emerson and Bacon are to be classed with Macaulay's and should be read by every woman who wishes to know and appreciate good literature.

CURE FOR SAN JOSE SCALE.

Toronto, April 25—The Ontario government has taken to feeding the San Jose scale on a new diet. Last year the farmers dosed the scale with soap. This year the mixture is emulsion of cod liver oil and potash. The government is also trying an emulsion of crude petroleum on the scale and between the fish oil and the coal oil product. Mr. C. C. Jones, Deputy Minister of Agriculture, has good hopes of seeing the foe of the fruit tree wiped out of Ontario during this season. Mr. George E. Fisher, who has been conducting experiments in western Ontario for the agricultural department, says that the trials made there have been in advance of any made elsewhere, as far as extent and variety of method are concerned. The new preparation is cheaper than the use of soap, and the applications from farmers for materials are far more numerous than last year. The government is making a generous distribution of the preparation.

Cause of Splitting Headache.

Poisons accumulate in the blood and spread every moment to all parts of the body. The brain becomes congested, nerves irritated, and the result is that awful headache.

Ferrozone is nature's own remedy for headaches; it is a blood strengthener and purifier of uncommon merit, a lasting potent tonic, and the greatest invigorant and health maker that is known. Headaches never bother people that take Ferrozone after each meal. Buy a box from your druggist for 50c. By mail from Polson & Co., Kingston, Ont.

Dr. Hamilton's pills cure liver complaint.

HOW TO PAPER WHITEWASHED WALLS.!

It is difficult to make paper stick to walls that have been made smooth by frequent whitewashing. The finish may be scraped off or the surface be changed with a coat of paste. If you decide to use the paste, make it in the following manner. Put one pint of flour in a sauce pan and beat into one quart of cold water. When smooth add two quarts of boiling water, stirring all the time. Let this boil up once, then strain and cool. Brush this paste over the walls and allow this to dry. When you are ready to paper, wet the walls, spread paste on the paper, and hang it in the usual way.

FIRST WOMAN JOURNALIST.

Who was the first woman journalist in America? Dr. A. R. Spofford in a paper read before the Columbia Historical Society, declares that one of the earliest was Mrs. J. B. Colvin, who published the Maryland Weekly Messenger in 1817. He finds from an examination of historical records the name of five widows of journalists who conducted newspapers in the eighteenth century.

Minard's Liniment relieves neuralgia.

CONSUMPTION SANATORIA.

The appalling part that consumption plays in decimating the population, and the comparatively recent discoveries that it is curable and preventable, combine to impose upon society the duty of battling against its as energetically as we assail small pox or diphtheria.

It is entirely possible to put a ring fence about consumption and exterminate it. Just as most communities are, on all ordinary occasions, free from small pox, so might they be free from tuberculosis. And, in the latter case, the cure is only fresh air and good food; and the danger of contagion so slight and circumscribed that it can readily be removed with practical completeness.

Under the circumstances we should have sanatoria for as many people as will use them. Retirement to a sanatorium means that the the patient will have his best chance of recovery, that he will not remain in the city to infect other people, that he will live under a scientific regimen which will effectually prevent him from reinfecting either himself or any of the other patients. Dr. Knopp, in a discussion of this question in the North American says that "sanatoria are not only healing institutions, but veritable schools of hygiene, and serve as examples to the community in which they are located. Statistics show indeed, that the establishment of a consumptive sanatorium in a place actually reduces very considerably the quanity of tuberculosis among the members of the resident community.

Consumption is to be classed as a communicable rather than a contagious disease. That is the presence of a consumptive is not a peril to other people if care be taken to destroy the sputum and not to inhale the breath of the patient. Sir James Grant, of Ottawa, estimates that the danger circle stops within three feet of the sick man, even when he is coughing or talking. This is easy to get into too much of a panic over the matter. A conscientious consumptive may feel that he is not imperilling his friends.

But sick people are apt to grow neglectful, and few living houses are sufficiently drenched in fresh air to heal a diseased lung. Hence the great need of sanatoria. They cure the sick and they prevent the spread of the disease. Public money could not be better spent than in supplying them to the extent of the public need.—Montreal Star.

THE GENIUS OF LABOR.

That Robert Louis Stévenson did not regard himself as born to his high calling, but rather considered his achievement due to unceasing labor seems to follow from the following bit of autobiography from his 'Life' by Graham Balfour:

'All through my boyhood and youth I was known and pointed out for the pattern of an idler. And yet I was always busy on my own private end, which was to learn to write. I kept always two books in my pocket—one to read, one to write in. As I walked my mind was busy fitting what I saw with appropriate words; when I sat by the roadside, I would either read, or a pencil and a penny version book would be in my hand, to note down the features of the scene or commemorate some halting stanzas.

Thus I lived with words. And what I thus write was for no ulterior use, it was written consciously for practice It was not so much that I wished to be an author (though I wished that too)as that I had vowed that I would learn to write.

Whenever I read a book or a passage that particularly pleased me, in which a thing was said or an effect rendered with propriety, in which was either some conspicuous force or some happy distinction in the style, I must sit down at once and set myself to ape that quality.

I was unsuccessful, and I knew it and tried again and again, and was again unsuccessful; but at least in these vain bouts I got some practice in rythm, in harmony, in construction, and in co-ordination of parts I have thus played the sedulous ape to Hazlitt, to Lamb, to Wordsworth, to Sir Thomas Browne, to Dafoe, to Hawthorne, to Montaigne, to Baudclaire, and to 'Chermann.''

Revolution in Newfoundland.

Since the introduction into Newfoundland of the new Inhaler Remedy "Catarrhozone" the treatment of catarrhal diseases has been entirely revolutionized. The old-time snuff and internal medicine has been cast aside and everyone is inhaling Catarrhozone which clears the head and throat in and pleasant to use. Catarrhozone is a wonderful cure for coughs, colds, catarrh, asthma, bronchitis, lung troubles and deafness. It relieves quickly and cures permanently. We advise our readers to try Catarrhozone. Price $1.00, trial size 25c. Druggists, or Polson & Co., Kingston, Ont.

Dr. Hamilton's mandrake and butternut pills.

The Cure of Headache.

Last week, Frances Robson, a Chicago school teacher, died shortly after taking a patent headache powder. The number of other deaths that have recently occurred from the same cause, as well as the greatly increased use of patent medicines of all kinds, call attention again to the danger that lurks in many apparently harmless patent drugs. Headache, which in the majority of cases is due to nervousness, is becoming so exceedingly prevalent not only among women but among men also, that it may be considered one of the ills that modern conditions of living peculiarly foster. To relieve it, therefore, almost any kind of a remedy is acceptable. The result is that an immense number of powders are put on the market, and all of them are finding ready sales. In the opinion of the best druggists and physicians, nearly all of these powders are dangerous. The greater number of them are made up principally of a coal tar product that acts directly on the heart, and which, if improperly administered, is deadly to persons suffering from any kind of heart trouble.

—A Winsted, Conn., despatch is to the effect that 'Farmer Henry C. Gabelman, who says he made a pile of money" last year selling apples bearing a bust picture of McKinley, has bought the Shults farm, on Wallens Hill, together with one of the finest fruit orchards in the vicinity. He says he will have the head of President Roosevelt crowned with a soft hat, outlined on all his fruit the coming season. Gabelman refuses to disclose his process for making pictures on apples.' It is doubted if the process was not known to Adam in his early youth. When the apple has attained its growth but is still green a piece of paper shaped like the picture desired is pasted on the side. When the fruit has ripened and colored the paper is washed off, disclosing the picture which will be perfectly white.

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—Recent experiences in Colchester, England, have once more demonstrated the value of antitoxin as a remedy for diphtheria. In a total of 286 patients, only 5.6 per cent of the antitoxin cases died, while of those treated by other methods 28.9 per cent. succumbed.

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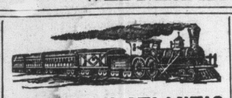

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Lawrencetown, N. S.—F. G. Palfrey, acting manager.
Liverpool, N.S.—E. R. Mulhall, manager.
Mabou, C. B.—J. R. McLean, acting manager.
New Glasgow, N. S.—R. C. Wright, manager.
North Sydney, C. B.—C. W. Frazee, manager.
Port-of-Spain, Trinidad—A. D. McRae, manager; C. E. Mainwright, accountant.
Sherbrooke, N. S.—C. E. Jubien, Acting manager.
St. Peter's, C. B.—J. A. Irving, manager.
Sydney, C. B.—H. W. Jubien, manager,
Sydney Mines, C.B.—R. Creighton, acting manager.
Wolfville, N. S.—A. F. Little, manager.
Yarmouth, N. S.—N. R. Burrows, "
CORRESPONDENTS.—
London and Westminster Bank, London, England; Bank of Toronto and Branches Upper Canada; Bank of New Brunswick, St. John, N. B.; National Bank of Commerce, New York; Merchants' National Bank, Boston; Royal Bank of Canada, St. John, N. B.; Royal Bank of Canada, St. John's, Nfld.

REED BROS.'
FURNITURE STORE.
We are showing this week the most complete and cheapest line of
Baby Carriages and Go-Carts
to be seen in the county. If you are wanting one, call and be convinced.
Baby Carriages with Rubber Tire, Patent Brake, beautifully upholstered, choice Parasol, for $8 00 and up.
Adjustable Go Carts, $10 up.
We can give you your choice of colored or white Parasols on either Carriage or Go-Carts.
☞We are still in it for Furniture of all kinds.
REED BROS.

WM. A. MARSHALL & CO.
Carpenters and Builders.
(18 years experience.)
Doors, Sashes, Mouldings, Building Material and Finish of all kinds.
Screen Windows and Doors a specialty.
Prompt Attention given to Jobbing.
Plans and Estimates Furnished.
Your patronage solicited.
Box 92. BRIDGETOWN, N. S.

INKS!
Writing and Copying.
Try Carter's Koal Black.
Central Book Store
B. J. ELDERKIN.

Navigation Open!
Schr. PACKET leaves Tupperville fot St. John this week.
The TEMPLE BAR leaves Annapolis for St. John about the 23rd.
The subscriber will have a full stock of Lime, Cedar Shingles, Salt, etc., first schooners.
We still have a quantity of hard and soft COAL.
J. H. LONGMIRE & SON,
Bridgetown, March 12, 1902.

NOTICE
All persons having legal demand against the estate of Samuel M. Witham, late of Clarence, deceased, are hereby required to render the same, duly attested within six months from date, and all persons indebted to the estate are hereby requested to make immediate payment to
IDA MAY WITHAM,
Administratrix.
Clarence, March 28th, 1902.

The Household.

FOR THE GIRL OF DEAR FIFTEEN.

Confident in what she considers her own great fund of knowledge the girl of fifteen has arrived at a point in her young life when she really needs to be told how little she knows. And it is when a daughter has come to this time that the mother should deeply sympathize with her and realize that her own responsibilities have not lessened, that, indeed, they have increased and that her child, now standing "where brook and river meet" never before so much needed a mother's care and confidence. All the tact and abiding love of motherhood will not prove too great a safeguard against the perils that are likely to beset the girl's pathway.

At an age when she is most likely to be flattered and beguiled by unsafe companions, one of the best guards is employment; something that will be congenial and carry her thoughts into pleasant channels; in fact, something she may think about to the exclusion of silly ideas and fancies that may appeal to her undeveloped mind with the result, perhaps, of making her, later, a laughing stock for her companions who have taken up a more sensible course. Some girls like to take up embroidery, lace making or china painting, and possibly the mother thinks the occupation useless or too expensive; but it may cost far less in the end than debarring your girl from her innocent desires.

Aside from these ideas, these are always many things in the home that may be made of interest to the girl of fifteen. Cooking should appeal to every feminine mind, and to concoct dainty dishes or make palatable the plainer ones, is a triumph to the aspirant after culinary honors. Then there are the delicate laces and embroidered handkerchiefs which the mother does not wish to send to the laundry: these may be washed and ironed at home, and it sometimes establishes a rivalry between sisters as to who shall produce the finest results in that line. And it is a real satisfaction to see things growing so smooth and beautiful under the pressing iron.

Most girls like sewing, and in many cases will attend a sewing school if they do not care for the same kind of work at home. This is probably due to the companionship found there and if the mother, taking her cue from this fact, would occasionally allow her daughters to invite a group of young friends to spend a Saturday afternoon with her and bring their sewing, it might be a happy experiment.

Meanwhile, while the mother is doing all she can to make her daughter's life bright, the daughter should remember that she, too, has her duties and that the first one to her parents, never treating them with rudeness or disrespect, but giving her best love in return for what she is constantly receiving. She must remember that, no matter how kind she may be at heart, the world judges by outside appearances, and that a girl who is rude to her mother is set down as ill-bred. And later on, when experience is hers, she will see and comprehend many things that she may now think quite unnecessary to her everyday life and habits.

THE GIRL FOR EVERYBODY.

There is a type of girl that everybody likes. Nobody can tell exactly why, but after you have met her you turn away to some other woman and you say "Don't you like Miss —?" Now the reason you like her is a subtle one. Without knowing all about her, you feel just the sort of a girl she is.

She is the girl who is sweet and womanly to look at and listen to, and who doesn't strike you as a poor imitation of a vulgar boy.

She is the girl who appreciates the fact that she cannot always have the first choice of everything in the land.

She is the girl who is not 'too good and bright' to be able to find joy and pleasure all over the world.

She is the girl who, whether it is warm or cold, clear or stormy, finds no fault with the weather.

She is the girl who, when you invite her anywhere, compliments you by looking her best.

She is the girl who makes this world a pleasant place, because she is as pleasant herself.

She is the girl who has tact enough not to say the very thing that will cause the skeleton in her friend's cupboard to rattle its bones.

And, by the bye, when you come to think of it, isn't she the girl who makes you feel she likes you, and therefore you like her.

THE SHIRT WAISTS OF 1902.

The fashionable shirt-waist is unquestionably the white one, and both thick and thin ones are made in great variety. Many different kinds of madras, plain linen, sheer muslin, tucked and trimmed with lace entredeux or with medallions of lace, and the daintiest of linen lawn embroidered by hand, dotted swiss muslin, and so on indefinitely through an almost incredible list of materials. The plain shirt waist of Madras or heavy linen has little fulness in front; some have the pointed yokes, some have plain yokes at the back, but the majority have no yoke at all—that is no visible yoke. One firm of shirt-makers turn out a waist that has a yoke in front, or rather, a yoke lining, for it does not show in the shape of an outside yoke. The waists are all made to give them a long-waisted line, pointed in front. The sleeves are of moderate size, in bishop shape, finished with a band at the wrist. Some are tucked but the majority are plain. There is one waist that has a small pocket at the left side that is thought very smart. Itis a fad, to have shirt-waists made to order, and it is undeniable that a better fit and a smarter effect may be obtained by taking this extra trouble. And yet it would seem as though in the hundreds of ready-made waists that are displayed there were enough to choose.—Harper's Bazar.

HOW TO BUY OILCLOTH.

In buying an oilcloth for a floor endeavor to obtain one that was manufactured several years before as the longer it has been made previous to use, the better it will wear, from the paint becoming hard and durable. An oilcloth that has been made within the year is scarcely worth buying, as the paint will be defaced in a very little time, it requiring a long while to season. An oilcloth should never be scrubbed with a brush, but after being first sweept it should be cleaned by washing with a large soft cloth and lukewarm or cold water. On no account use soap or take water that is hot, as either of them will certainly bring of the paint. When it has dried, you may sponge it with milk, which will brighten and preserve the colors, and then wipe it with a soft dry cloth.

A COZY CORNER ON THE PIAZZA.

The best arrangement may be made in the corner of a roofed piazza. Have a box seat built here. It should be sixteen or seventeen inches high, twenty inches wide, and as long as the place will allow. In this box may be kept rugs, cushions, pillows, etc., secured with a lock. Screen the corner with curtains that can be rolled up, or drawn with ease. Cotton duck, such as sails are made from, is the best to protect against strong or cold winds, but bamboo makes the lightest and most artistic screen.—Maria Parloa, in the May Ladies' Home Journal.

Minard's Liniment cures dandruff.

Joker's Corner.

AN ORIGINAL HABEAS CORPUS CASE.

Some years ago a well-known promoter started to boom a new town in Montana. He adopted the usual methods, built electric railways, established an electric light plant, put up business blocks and erected himself a fine house.

Among the other business enterprises he established a bank, of which he made himself president, and, in order to inspire confidence in this, as well as in his other ventures, he persuaded some well-known Montana men to become directors, among others the then United States Senator, T. C. Power.

Things went along swimmingly until the panic of 1893, and then the bubble burst, and the bank suffered in consequence. At the directors' meeting at which the president was conspicuous by his absence, it was decided that rather than have the bank fail each stockholder would 'dig up' and save it. After the meeting the members of the board went around to Mr. Promoter's house to acquaint him with their decision. They found him smoking in the luxurious library, and he listened attentively until the speaker finished the explanation, and then he said:

"This is a good idea, gentlemen, very, and I regret that I cannot join you."

"Why not?" enquired almost every man at once.

"Because I have absolutely nothing to give."

"What's the matter with your business blocks?" asked one.

"They belong to my wife," sauvely replied Mr. Promoter.

"How about your electric railway?" enquired another.

"That, too belongs to my wife."

"Well, to whom does this house belong?"

"I gave it to my wife as soon as it was built. I am very sorry, but you see I have absolutely nothing but my body I can call my own. I would gladly give that to be divided up if it would do any good."

"Well gentlemen," and Senator Power smoke for the first time, "if you decide to accept Mr. Promoter's last proposition and take his body, I speak for his gall."

A SLIGHT MISTAKE.

"One of the best stories I ever have heard," said Representative Foster of Vermont, yesterday, "was the story of a man who was stranded in Jamaica, with only enough money in his pocket to pay his passage back to the United States. He thought the matter over, and came to the conclusion that he would buy the ticket, and as the trip only lasted a couple of days he would go without food for that time. He realized that if he remained in Jamaica and