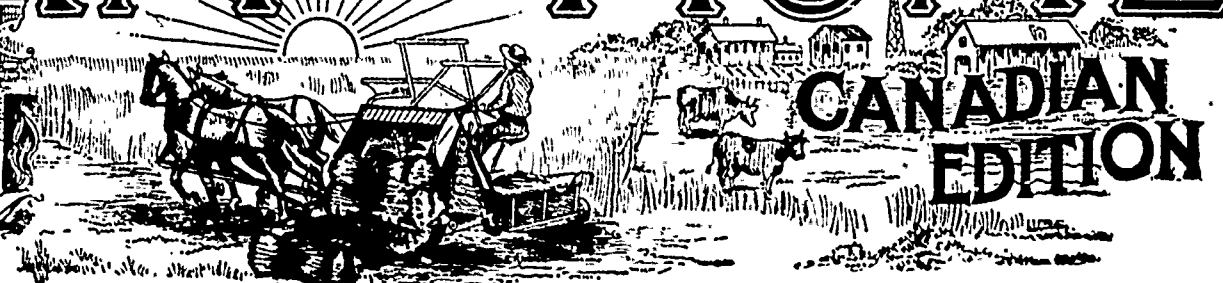


FARM AND HOME



St. Laurent College
The Joseph Carter Trust

CANADIAN EDITION

Vol XXI No 413

SPRINGFIELD MASS, MONTREAL and CHICAGO AUGUST 15 1900

x 50 Cents a Year

Farm and Home Problems.

OUR growing boys and girls are liable to meet with even graver problems than those of to-day, in the coming century. Then for the love of them and of humanity, select the very best teachers to be found for the public schools. Begin right now. Methods are secondary; get the wisest, kindest, broadest men and women to be found, such as will sympathize with the pupils and bring out the best that is in them. Scores of letters received in our hired-helms contest emphasize the economy of getting good men and paying good wages. How much more important to employ the best teachers to be had!

A woman whose early home happened to be in a district where verandas did abound, and is living now in a different region, writes me: "It makes me hot when I drive around and see farmhouses with everything else one wants except a piazza—which hereabouts isn't much bigger than a pocket handkerchief. Yet inside there is a holy of holies of a parlor. If there is a scrap of a piazza, it is sure to be on the hottest side of the house."

Is your boy talking of seeking employment in the city this fall, against your wish? The larger places must have some of our brightest and best, but they have had more than their share. After sounding many fathers and sons I am convinced that the average boy would be willing and glad to stick to the farm if two conditions, in particular, were right: First, that he have fair play in the working of the farm, and second, that he have enough of contact with the outside world, enough of change and recreation to escape the craze which some boys have for a different life. It is human nature to crave that which is denied. Take the boy around with you, let him see with his own eyes that the successful farmer is a man of affairs, with a wide acquaintance, and the farm will cease to be a prison and become a delight.

The speculators on the Chicago board of trade are becoming wonderfully virtuous, making a fight to the finish against the bucket shops. The latest development is the refusal to send out over the telegraph wires continuous quotations because these enable the bucket shops to do business. A little earlier the board suspended for one to five years some of its members, including one prominent officer, for bucketshopping and within a few days the city authorities have made numerous arrests of operators of these fraudulent trading concerns. While the efforts of the produce exchanges of cities to exterminate the bucket shops may be ascribed to selfish reasons, the fact remains these nefarious outfits should go. There is not the semblance of right in their so-called trades, and the tendency is to depress the price of farm speculative commodities such as grain and provisions.

One Way to Co-operate.

A movement has been started for free rural mail delivery by the board of trade in the small city of Windsor, Ont., opposite Detroit. There is every reason why the royal service should deliver the farmers' mail right to his door, just as is being done by Uncle Sam across the line. This year \$1,750,000 will be expended in free rural mail delivery among the farmers of the states. But the post office department will get a large slice of it back by largely increased business and closing

valued at 101,600,000 and from Great Britain nearly 37,000,000. Our exports to Great Britain were 99,000,000 and to the states over 45,000,000. Much of the imports from the states is raw material which goes through manufacturing processes, including coal, cotton, wool, hides, corn, tobacco, etc.

An Impending Evil.

The Canadian Bank of Commerce, by its absorption of the Bank of British Columbia, thereby increases its capital stock to \$8,000,000 and its reserve to

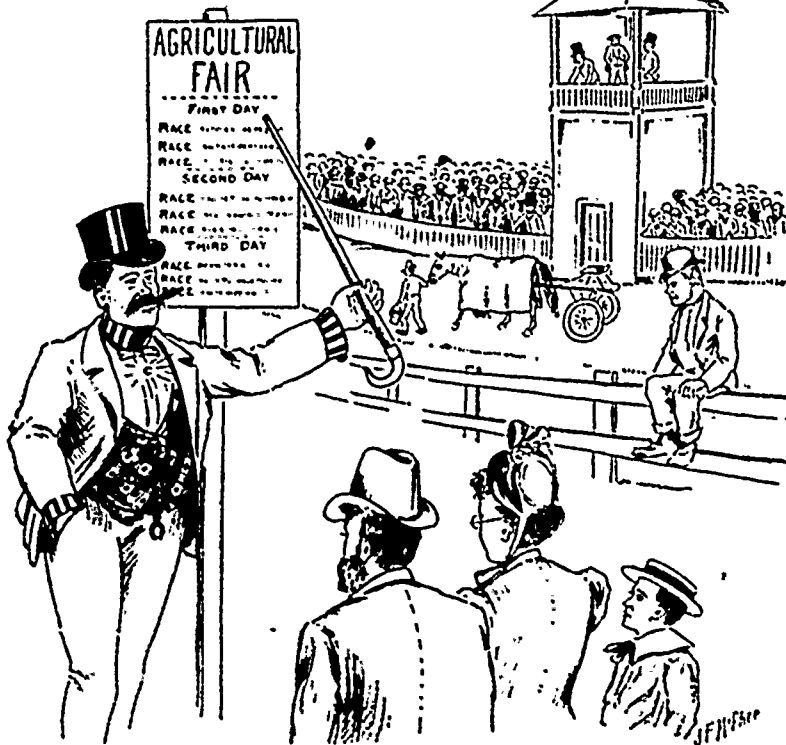
from Yamaska river to St Francois du Lac, Que. The federal government paid the promoters \$3200 per mile and the Quebec government 4000, a total of 7200. The subsidy secured, the enterprising promoters took up the rails, carried them over to Nicolet and put them down on a section of the Nicolet and St Gregoire road and received a new federal subsidy of 3200 per mile on the same rails. But one train has ever been run over the rails of this road which has cost the people 10,400 per mile.

The Hired Man Problem.

Not only ought the hiring farmer to be interested in our "hired help" contest but the hired man as well. Many points are brought out in the short opinions and practices of our hiring farmers that are of value. And many a hired man can thank his lucky stars he has so good a place to work. Of course others will watch with longing hopes for a better place than they now have. But after all, every hired man's place is made pleasanter and better when mutual co-operation exists between the hiring and the hired.

A Big Prize, Easily Won.

This coupon pretty nearly tells its own story. All the competitor has to do is to read the advertisements in Farm and Home (Aug 1 and 15) to find that one which you think is the most effectively written; that is which advertisement is so expressed as in your judgment to best accomplish its purpose of making known, or increasing the demand for, the article advertised. Write the name of such advertisement in the coupon below, together with your own name and address. The advertisement that gets the largest number of votes will be the correct answer, and the coupon earliest mailed that names this advertisement will win the \$25.



The Agricultural Fair of To-day—Where Does the Agriculture Come In?

It is not really quite so bad as this, but the trotting horse is getting to be the chief "agricultural" product shown, often robbing more important departments of their share of the prize money.

of superfluous country post offices. But even if he don't, it is cheaper to pay a little more taxes and give some honest neighbor a job delivering the mail daily than for 100 farmers to each drive an average of 3 to 6 miles several times a week for the mail. By a little co-operative effort of this kind, our readers can save time. And time is money with the ambitious.

The Foreign Trade

of the dominion the past year reached proportions never before attained, nearly \$313,000,000, while the value of exports show a decrease our imports were some 23,500,000 greater than the year before. In per cent of total trade, the United States took 44, Great Britain 43%, and all other countries 12%. We bought from the states merchandise

2,000,000. Its branches for doing business are increased to 69 in number. If a few more "absorptions" of this character occur, the Dominion will have a bankers' trust far more powerful than the one now said to exist in the states. Canada's area is too great and the country too sparsely settled to allow a few persons of wealth to control its finances. Already the C P R is commonly regarded as a creature greater than its creator and should it and the few banks join hands it would be a sad day for the people of Canada.

Railroad Promoters Still Active.

One of the worst exposures of the utter weakness and possible corruption of existing method of granting railway subsidies, is the Sun's investigation of the grant to the proposed railway

\$25 Advertisement Prize.

I think the advertisement of,

.....
in Farm and Home of Aug..... 1900, was the most effectively written advertisement printed in Farm and Home during August. Send the \$25 prize (if awarded me) to my address as follows:

Name

Postoffice

State

Fill out this coupon to-day and mail to Farm and Home, Chicago, Ill. or Springfield, Mass.

FARM AND HOME

Copyrighted for 1900 by The Phelps Publishing Co.

PUBLISHED

SEMI-MONTHLY

(1st and 15th of each month)

BY THE PHELPS PUBLISHING CO.

Entered at postoffice as second-class mail matter
TERMS.—50 cents a year; 25 cents for six months,
payable in advance. Clubs of two or more, 35c per
year. New subscriptions can begin at any time dur-
ing the year. Sample copies free.

RENEWALS The date opposite your name on
your paper or wrapper shows to what time your sub-
scription is paid. Thus, Jan 01, shows that pay-
ment has been received up to January 1, 1901, (Feb 01,
to February 1, 1901, and so on.) Some time is re-
quired after money is received before the date, which
answers for a receipt, can be changed.

DISCONTINUANCES Farm and Home is con-
tinued to responsible subscribers until the publish-
ers are notified by letter to discontinue, when pay-
ment of all arrearages must be made. If you do not
wish the paper continued for another year after your
subscription has expired you should then notify us
to discontinue it.

CHANGES Subscribers wishing a change in ad-
dress must send the old as well as the new address
to which they wish the paper sent.

ADVERTISING RATES—Eastern or Western
Editions—50 cents per square line each insertion.
Both editions \$1.50 per square line each insertion.
Discounts for contracts made known on application.

FOR THE CONVENIENCE of its patrons Farm
and Home has offices at:

27 Worthington St., 204 Dearborn St.

SPRINGFIELD, MASS. CHICAGO, ILL.

Orders for subscriptions, advertisements, and ed-
itorial letters can be sent to either office.

RENEW NOW If this date—
Sept. '00—ap-
pears on the lit-
tle yellow address label bearing your name, which
will be found on the wrapper or margin of your
paper, your subscription, which, as the date shows
is paid up to September 1, 1900, expires with this
(August 15) number.

We hope to receive your renewal, and count upon
you to continue with us for the coming year. We
want as many of the renewals now as possible, and
as an inducement to renew at once we make the
following special offer:

If you do not join a club or form one, we will ac-
cept your single subscription at the club rate, and
send

FARM AND HOME

A FULL YEAR

FOR ONLY 35 CENTS,

providing it is sent immediately or before Septem-
ber 5th, 1900.

As a still further inducement we will send to all
renewing at once,

A DICTIONARY FREE

A full description of this Dictionary, which is the
best and most comprehensive of its kind and which
none should be without, will be found elsewhere in
this number.

Now then is the time to renew. Sit down to-
day, fill out the blank which you will find in your
paper, if your subscription expires, and send with
35 cents, in postage stamps or otherwise, and
receive Farm and Home regularly twice a
month for the year to come.

When renewing your subscription be sure to
say that it is a renewal, also write your name and
initials exactly as they appear on the address label
bearing your name. Use the blank which you will
find enclosed in your paper and be careful to give
the name of the postoffice where you receive your
paper.

SEE our special premium offers in this issue, also
in premium list A of some of the many valuable articles
that may be had in connection with Farm and Home
at a reduced price.

HOW TO SEND MONEY.—Amounts less than
\$1 can be safely sent to money order, which you
can get at any postoffice, and which costs but three
cents, or, if more convenient, in postage stamps.
Two-cent stamps preferred. Send \$1 or more in
bills, by registered letter, postnote or express
money order, check or draft. A two-cent revenue
stamp should be affixed to all checks and money or-
ders. A money order or registered letter, costs but
a trifle and may be sent at our risk. Make
money order, check or draft payable to The Phelps
Publishing Co.

Address all orders to

FARM AND HOME.

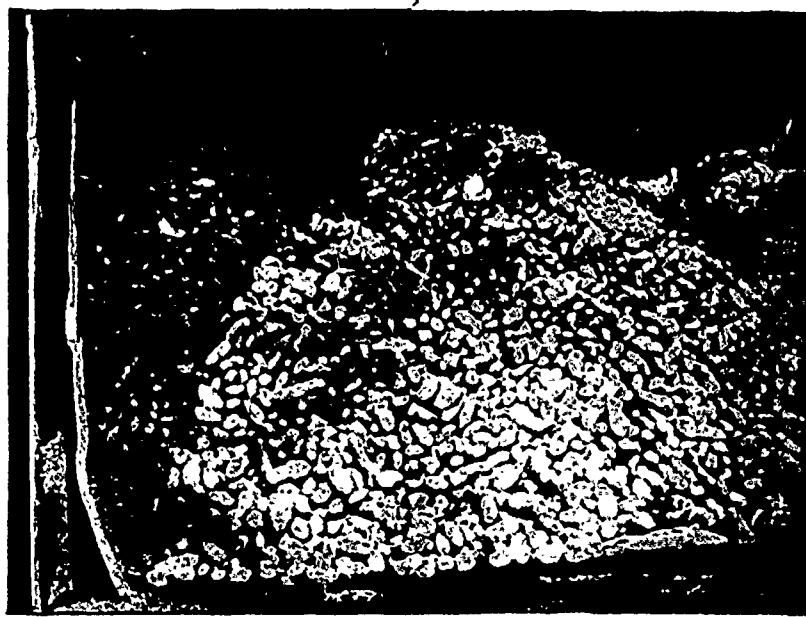
Springfield, Mass., or Chicago, Ill.

Fall Work on the Farm.

STORING THE POTATO CROP.

In F & H July 1, a scene was por-
trayed showing the harvest of a 4000 bu
crop by A. N. Hoxsie, the largest
grower in R. I. This year he has 70 u
potatoes. Our last issue showed Mr
Hoxsie assorting the crop. We now
show by two cuts the crop in the pit.
This pit was not designed for winter
storage, but to house the crop in the
field and thus save handling and cart-
age. A place was selected in the field
somewhat above the general level in
order to secure good drainage.

The pit was opened with a plow and
pair of horses, the plow being put down
to the beam and dirt thrown to each
side by two men and shovel with rope
litch, and repeated to get required
depth. The bottom was plowed to
make easy removing with shovel. Sides
were built as the pit was filled, pota-
toes one side and bank the other, sim-
ply using the beards for a division,
thus saving any special fitting or nail-
ing. It was built 5 to 6 ft wide and
filled 3 to 4 ft in center, rounded or
shaped on top as illustrated, thatched
and papered with tarred paper, then
covered with dirt, adding to it as cold
weather increased. Ventilators were
placed every 10 ft. Potatoes were stored
and sold during Nov and Dec. There
was no lugging down cellar and out. I
should recommend an air chamber at
the ridge the whole length of pit, with
ventilators every 15 ft, if storing for
the winter. Store after Sept, putting
them in dry and letting them go
through the sweat before covering with
air-excluding material, using judgment
in not getting them too deep, or the pit
too wide. They keep better than in a
cellar, coming out crisp and hard. Tur-
nips may be kept in the same way. Two
men and a team can open in four
hours enough to pit 2000 bu. I do not
use boards for bottom and sides if put-
ting turnips, as they have to be han-
dled. When empty, plow back and the
field is as before.



Interior View of Potato Pit.

It across, and cost nothing but labor.
This is commended to the attention of
people living in butte regions, where
advantage of such seepage water may
be taken.

SUMMER HAULING OF MANURE.

There is usually a lull in farm work
in summer and it cannot be put to bet-
ter advantage than in hauling manure
that has accumulated about barns and
feed lots during winter and spring. This
will be the best time for top dressing
hay lands and stubble fields that are
to be plowed soon. Manure should be
spread thin and even on hay land, so
as not to burn or smother the grass. As
the stubble is to be plowed under, so
much care will not be necessary with it.

The heaviest and richest manure
should always be put on hill tops and
sides, and upon thin places. The rich-
ness of soil is constantly being leached
out by water and carried to lower por-
tions of the fields. By enriching the
upper parts, the gentle rains of fall and
the thawing of the snow will carry the
richness to the lower levels of fields,
distributing it more evenly. If fertil-
izer is needed on a field where there is
a growing crop, a good plan is to haul
out in piles and leave along the border
of the field, to be scattered when the
crop is harvested. These piles should
be put along the high ground so that
rains falling on them will distribute
the liquid manure leached out over the
field. Do not fertilize heavily along a
slough or near a watercourse. You
need all the richness that will be car-
ried away on your farm.—[J. L. Ir-
win, Nemaha Co. Kan.]

Bidding Land of Canada Thistle.—
Get the land well set in clover, and the
richer the better. Let it stand until
just as the thistles begin to show bloom,
then mow it, being sure to cut all this-
tes. It is well then to apply some plaster
to start a quick growth of clover. When
the clover is up a good growth, say at
the middle or last of July or early Aug,
plow the field, and be sure that it is
all plowed. Don't cut the clover, but
plow the whole ground, having a chain
on plow if necessary, to put all the
grass under. Roll at once and harrow
so as to cover all the thistles. Keep
the field well cultivated all the follow-
ing fall. Every time a thistle shows,
go over it with some broad-toothed cul-
tivar, having the teeth sharp, and in
two days after follow with hoe, cutting
off the head of every last thistle. Fol-
low up till late fall, then in the spring

plow the field and you will have the
best of all fitted fields for barley or
oats.—[J. S. Woodward, Niagara Co.
N. Y.]

Growing Tobacco Seed.—The boldest,
thriftiest plants only should be left for
seed, grouped as close together as pos-
sible that the bees may fulfill their
mission of distributing pollen. The
plant may be "primed" like the other
plants and the leaves stripped down to
10 or 12. After the seed head has de-
veloped 20 or 30 blooms, all other buds
and bolls should be carefully picked off
and thereafter removed as fast as they
appear, leaving only the first 20 or 30.
Seed heads pruned in this way will pro-
duce much larger and I believe better
seed.—[W. J. Prindle, Webster Co, Ky.]

The Most Durable Fence. and, in the
long run, the most economical, is a wire
fence with hedge posts about 1½ rods
apart. In this section hedge fences are
used mostly at present, but many have
been destroyed every year, as there is
so much work to keep in proper con-
dition. In order to keep it down and
of good appearance, it must be trimmed
at least twice a year. After going to
the trouble of trimming twice a year it
is then undoubtedly the nicest fence
that can be had.—[Ford Co (Ill) Reader.]

Worthless Prairie Sod.—O. B.'s prairie
grass pasture is failing and wants
to know if it is best to plow in Aug or
Sept and sow to rye and timothy or
wait until next spring. I would advise
him to use, instead of timothy, Bromus
inermis, or awless brome grass. This
is a grass much better adapted to pas-
ture in this region than is timothy.
He should, however, wait until spring
before sowing it, and then seed it alone
without any nurse crop. This will give
excellent pasture when it does take hold
and will be much more satisfactory
than timothy. Sow 20 lbs seed p a
broadcast and harrowed in thoroughly.
[Prof Thomas Lyon, Neb Exper Sta.]

OUR ADVERTISERS.

It is the intention of the publishers of
Farm and Home to admit into their col-
umns none but reliable advertisers, and
we believe that all the advertisements in
this paper are from such parties. If sub-
scribers find any of them to be otherwise,
we will esteem it a favor if they will
advise us, and we will at any time give our
personal attention to any complaints
which we receive. Always mention this
paper when answering advertisements, as
advertisers often advertised different things
in several papers.

The Circulation of FARM AND HOME
for this issue is

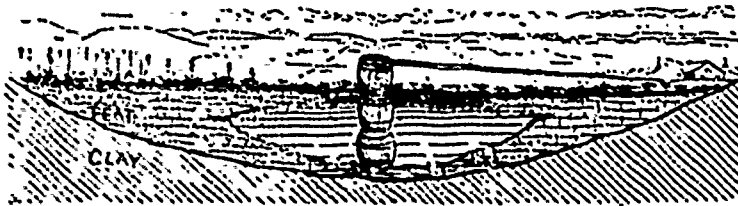
300,500 Copies.

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.

UTILIZING SEEPAGE WATERS.

Simplicity is the highest attainment
in the art of invention and the very em-
bodiment of this is found on some farms
where water has been brought to the
surface in some simple way. Two or
three kerosene barrels, set end to end,
after being nailed and cemented to-
gether, have been sunk in a boggy spot
where water showed a tendency to well
up to the surface. A gas pipe was con-
ducted from it to the fields where wa-
ter was needed for stock or irrigation.
Without additional outlay, this admir-
ably simple device did its work un-
interruptedly for years. Similar devices
have been rigged up to furnish spring
water for domestic use as well as for
stock and irrigation of gardens.

In western Neb, where homes are
often advantageously located at the
base of lofty buttes and table lands,
water is found seeping out at the base
of a sandy layer overlying white river
clay. Taking advantage of this circum-
stance, some have dug back a few feet,
making a shallow cave, thus broadening
the surface for seepage to such an
extent that it yields a liberal supply of
fine pure water for house use and for
the stock. Sometimes the water from
these seepage caves is conveyed by
means of wooden troughs to the milk
house, then to the horse trough, thus
doing double duty. At one place, after
passing water through the milk house
the owner conceived the idea of driving
the water up a small hill to his home
and beyond to his barn by means of a
small hydraulic water ram. The plan
worked admirably. It supplied more
water than was needed by the family
and stock, and yet the excavation was
not deeper than 4 or 5 ft and 8 or 10



Drawing Water from a Boggy Spot.

To Exterminate Prairie Dogs. the
following formula and poisons are rec-
ommended by the Neb exper sta. Com-
pound it carefully, exactly as recom-
mended. Dissolve 3 oz strychnine and
½ lb potassium cyanide in 1 qt boiling
water, then add 2 gts molasses and 1
teaspoonful of oil of anise. Stir, then
place 1 bu wheat in a tight receptacle
so there will be no loss from leakage
and pour the foregoing solution over
it. It should then be well stirred while
an assistant slowly sprinkles into the
mixture 4 lbs finely ground corn meal.
The molasses renders the liquid adhe-
sive, so that it will cling to the grains
of wheat. The object of using the corn
meal is to absorb the superfluous liquid
or syrup and thus enable the grains of
wheat to carry a larger amount of poi-
son. Drop a spoonful in or around each
hole. One bushel will do for 160 a in
an average prairie dog town.

Organize and Educate.

THE GRANGE IN RETROSPECT.

As the secretary of the national grange has recently issued a leaflet stating the name of the first grange in each state, town in which organized and date of organization, and also the date of the organization of the various state granges, a glance at the table below is of interest. The statement of the national secretary shows 41 state granges as having been duly organized. Subordinate granges have also been organized in I T, Nev and Ariz. The only states and territories that have never had a grange are: Alaska, N Mex, Okla, Utah and Wyo. The states entitled to voting membership are shown in the table below by dots; the dormant state granges (less than 15 subordinate granges) by cyphers.

While the voting membership of the national grange (a state is entitled to representation that has 15 live granges) was largest at the early organization of order, the falling off was not noticeable for 15 yrs, but in '92 Wis was unrepresented and Tenn and Ala dropped out. Since then Ky, Miss, Va and Neb have become dormant as state organizations. While there has been a decline in the organized work and co-operative efforts of farmers in the south and west, yet numerically the grange has a larger paid-up membership to-day than it has had for many years. The strongest grange states at present are as follows: N Y 42,000 members, Me 24,500, N H 22,500, Mich 20,000, O 19,000, Pa 18,500, Mass 15,000. The national grange has for years been liberal in the spending of its funds for organization work in the dormant states, but of recent years very poor returns have resulted from such expenditures. Farmers of the south and west do not appear to be ready to organize and co-operate. In the more strongly organized states much good work is being done and the increase in membership keeps steadily on. If farmers of every state and territory in the Union would enroll their names as members of the grange, the farmers of the country, with well chosen farmer leaders, as are the present officers of the grange, could do much to improve their condition.

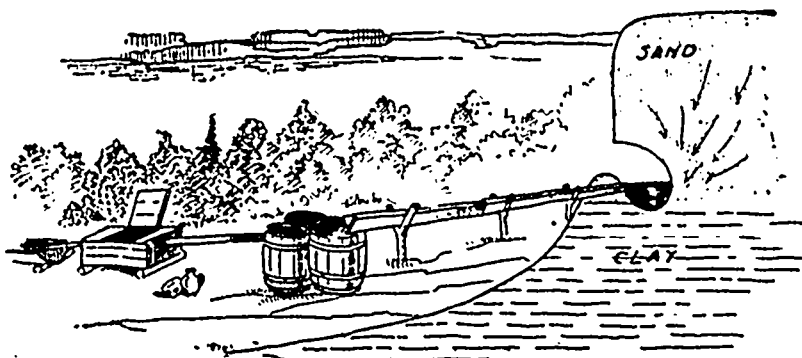
A FARMERS' FAIR SHOULD PAY.

Would a farmers' fair be patronized sufficiently by farmers to award liberal premiums and pay other bills? Why not? Is the farmer so indifferent as not to have interest to patronize that which is for his own enlightenment and good? No, he is the most faithful to enterprises where he is benefited of any business man. I believe farmers could raise the necessary means to support a fair on the principles Mr Rice suggests in F & H Aug 1, without aid from the outside if necessary.

A purely farmers' fair for many sections would be the starting point for the uniting and enlightenment of farmers, which are fast coming to the front as our smartest, most faithful and unflinching citizens and statesmen. The farmer should have his fair and show the world the products of his industry. A well-prepared fair should be most interesting, for the mechanic may from it draw new patterns and get new ideas, the manufacturer learn more of the raw material, its growth and quality, the artist find new sights and colors for his brush, the sculptor new models for his hands. Such a fair should have the largest interests and patronage, and be able to award the largest and most numerous prizes.—[F. N. Cummings, Ill.]

The Farmers' National Congress holds its 20th annual session at Colorado Springs, Col. Aug 21-31. Addresses on live topics by representative citizens from all parts of the country are on the program. Greatly reduced railway rates have been secured. John Stahl of 4323 Langley Ave, Chicago, Ill, is secretary.

T. J. Duncan of Bloomfield, Kan, an invalid, rented 190 a wheat ground last fall, and his children, a girl 16 yrs and a boy 14 yrs, plowed it with riding plows, the girl harrowed it, and the boy followed with the drill. A man was hired to run the harvester, the children doing most of the balance of the work. The 190 a yielded 4000 bu of 61 lbs wheat.



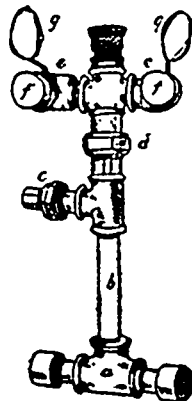
Securing Seepage Water from Base of Sandy Layer.—See Opposite Page.

The Handy Mechanic.

A NEW WATERING DEVICE.

A novel watering device which would be appreciated in especially rural districts, is that invented by L. B. Lewis of Hampden Co, Mass. It is not patented and so simple in construction any plumber can make one. The device, as illustrated, is made to set in any water tank along the highway from which horses or animals drink. It can be made of any length so as to fit any size or shaped tank. Having a neat and smooth cup at its upper end, which extends 2 in or more out of the

water and close to the rim of the tank, it is easy to drink from. Galvanized iron is used of 1 in size. The piece, a, has closed nuts screwed on each end; it serves as a rest and foundation for the whole structure, being firmly bedded on the bottom of and inside the tank close to the tank's side to hold it in place. Piece b may be of any length desired, being regulated by the height of the tank. Piece c is a union by which the water enters the device. It can be made at such height as will suit the inflow of water. If desired, piece c is not necessary, as water can be received through piece a, provided connections are made for it. Piece d is a union for connections. Pieces e are arms screwed to a T connection, extending out 1 in in opposite directions from the main pipe and then turned 1 in at right angles to the front. A nut, f, is screwed to each end. The face of each nut, f, rests against the side of the water tank and the whole device is held tightly by malleable copper wire, g, fastened at the thread between joint of pipe, c, and nut, f. Small holes are drilled in the edge of the tank, 1 in from the top, and the wire, g, drawn through two or three times and securely fastened. The de-



vice thus rests securely on a and is held firmly in place at f by the wire. Into the T piece is fitted a 1 1/2 in nickel-plated drinking cup 1 1/2 in long. The cup stands about 2 in above the surface of the water in the tank, is 2 1/2 in from the rim, so can be easily drunk from. Mr Lewis has placed 50 of these devices in water tanks in 18 cities and towns of Mass and Ct, gratis. He hopes that towns and cities will have sufficient enterprise to have local plumbers make them and place in every water tank. The weary traveler, the bicyclist, and in fact everybody, when thirsty, would appreciate them.

A EUROPEAN HAIL GUN.

Hail storms have done extended injury to crops nearly every season in sections of southern Europe. After 3 yrs of experimenting, Moritz Stiger of Styria invented a hail gun which affords complete exemption from hail injury. Stations are located at intervals of about half a mile apart in regions subject to hail storms, and are provided with a small cannon placed vertically and surmounted by a 6 ft narrow, conical trumpet, which transmits the vortex and concussion of a 2 1/2 oz charge of powder to the threatening cloud, preventing the formation of hail and apparently also diminishing the electrical discharges. Since Mr Stiger's invention a new style of breech-loading, rapid fire gun, or repeater, as illustrated herewith, has been substituted, and 500 of these anti-hail stations have been and are being established at Brescia for the protection of vineyards. Small bombs with time fuses have been added to the equipment and it is stated that the vortex, outlined by means of the dust, reaches the height of over a mile and that its low, whistling noise is heard 14 to 17 seconds after its discharge.

At one station in Italy these guns were fired more than 1000 times from 56



NATIONAL GRANGE VOTING MEMBERSHIP.

	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	
1 Ala																												
2 Ark																												
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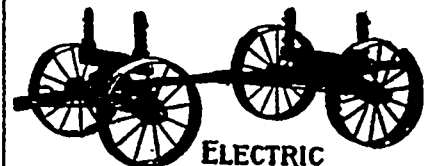
stations, and during the summer, clouds were bombarded 40 times. The firing must be going on just at the moment of calm which precedes the bursting of the storm, or else it is altogether unavailing, as this seems to be the period during which the hail is formed. Stiger's guns have absolutely prevented hailstorms for 4 yrs, and now the vineyards of Italy are being generally protected. Italy has 4000 stations and France in this summer establishing a large number. Hail insurance has been generally abandoned where these guns are in use. In our own country, the use of hail guns, if as successful as in Europe, would remove the greatest uncertainty in the raising of the tobacco crop.—[Director E. W. Hilgard, Cal Exper Sta.]

Comforts on the Farm—The vast number of farm houses possess not one redeeming feature. Instead of finding a steady, even temperature throughout the house, well equipped bathroom and a kitchen provided with convenient appliances for lessening the burdens of overworked wives and daughters, we find that during winter parts of the house are overheated and in other parts the thermometer ranges about zero, and a house plan apparently designed to combine the greatest possible amount of discomfort and inconvenience. Our farmers are highly industrious and their daily labor extends over many weary hours, but our lives should not be wholly given up to this. In our homes, our life habits are formed and characters built up, and no condition is more favorable for developing a sturdy energy and manly self-reliance than the environment of the well-regulated country home. Beautifying our homes enhances at the same time the value of our farms.—[Past Lecturer W. F. W. Fisher, Dominion Grange.]

Milkweed cut two or three times a year and not allowed to seed will soon disappear. A good instrument to clip the second crop with is made by taking a common grass hook and substitute an old rake-stalk for a handle, thus with long handle many steps are saved and it makes a handy tool to have about a place.—[J. C. Fern, Ct.]

Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the new famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



ELECTRIC

This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel bounds, etc. Guaranteed to carry 600 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low down wagon at will. Write for catalogue of the full "Electric Line" to Electric Wheel Co., Box 24, Quincy, Ill.

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for barns, stables, fences.

Weather-Proof Fire-Resisting

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MAGNITE

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can be put on over old paint; saves labor and time; cheaper in the end than whitewash; for cellars, hen houses, fences. Made in white and if you want for best results for A. Write for best dealer to J. A. & W. H. B. & Co., Boston, Mass.

Among the Farmers.

A REVIVAL IN FRUIT GROWING.

The fruit growers of Ont are beginning to lift their heads with encouragement. In 1898 they were almost in despair because for 5 yrs prices had been gradually lowering in sympathy with the general commercial depression and added to that, the scab and mildew, scale and caterpillar were steadily on the increase. All these evils seemed to culminate that year, and the poor fruit grower began to look upon other industries with envy. Some offered their fruit farms for sale and some began rooting up fruit plantations in order to plant other crops. The change began in 1899 when better prices ruled, and now in 1900 we have both better crops and better prices, and the fruit grower again may consider himself the happiest conditioned of men.

To particularize a little. The strawberry crop was perhaps a little short, owing to the lack of rain in May and June, but the prices were good, averaging about 8c p qt. The varieties most grown are Williams, Watfield, Haverland, Bubach, Maheff, Clyde and Woolverton; the Clyde is a great favorite and is being much planted.

Cherries have not equalled the great promise of blossoming time, a late frost seemed to cause the tender varieties to drop badly, so that while Richmond, Mortmoreney and Morello were well loaded, many of the sweet cherries were thin upon the trees. The aphid was on hand as usual, but the lady beetle cleared it out before cherry harvest.

The finest Duke this year was the Reine Hortense, young 5 yr old trees were worth a journey to see, with their immense loads of very large, attractive fruit. It may be a little soft for distant shipment, but for the home garden it has no equal as a cooking cherry. May Duke was well loaded and is a most excellent flavored cooking cherry, but is a little small when the crop is heavy.

Of the sweet cherries the old Governor Wood, Tartarian, Napoleon and Spanish are the standbys still, but on our young trees Cleveland seemed to us superior to Governor Wood, and is of the same season. Tartarian brought as high as \$2 a basket, and certainly no cherry is so excellent for dessert. The best late black here are Elkhorn and Windsor.

Raspberries are going to be over too soon, for the rains came too late to give size to the later berries, but the price has averaged about 7c, making those growers sorry who dug out their plantations.

Currants have also surprised growers this year. The crop has been good and prices quite satisfactory, viz, from 5 to 6c p qt for Fay and Cherry. At these prices no crop would pay better for an acre will give a grand yield. One of our new varieties gives great promise, viz, the Wilder. The berry and bunch are immense and the bushes most productive; Belle de St Gilles is as large but not nearly so productive. White currants have little value in Ont, and black varieties are too thin on the bushes and are too costly in picking. [Sec'y L. Woolverton, Ont Fruit Growers' Ass'n.

PRINCE EDWARD ISLAND.

Grass lands of second cut will be light; the new grass is much better but will not be up to that of last year by many tons. There is a large surplus of hay held over from last year, which will give an abundance for this year's necessities. Grain crops looking very thrifty and promise a full average crop. Of the root crop, which is a very material crop with us, all indications point to a good yield.

Farmers are going into dairying more than formerly, in fact dairying is the farmers' financial salvation in this country. We have no other mode of making so much money as can be made by dairying. Our grasses seem to be somewhat better than almost anywhere else. The pastures never go dry, and a bite can be got out of almost any portion of our land if the soil gets anything like a fair show. Years ago, like most everywhere else, farmers would crop their land for oats every year. It was a ready seller and the land gave a good return for what little labor was



Pitting Potatoes in the Field. AS TO HOW IT IS DONE, SEE PAGE 346.

given to it. Times have changed, the land refused to be robbed every year without some return being given her, and the farmer has turned his land into cow pastures, at the same time feeding both the cow and land better than they ever did before. The result is, the farmer is getting his land back into something like its old-time fertility and good crops are the result. Feed the cow and she will feed the land, and the land will in turn feed the cow.

Very little, comparatively, of beef is grown, comparing its value with that of dairy products. Of late years a few farmers are again taking up beef raising, but their numbers are small compared with those who follow the dairy industry. Our butter and cheese command a good price in the markets, and there is not so much labor attached to the manufacture of these articles as formerly. Our dairy industry is run on the co-operative system. Farmers club together and build a cheese or butter factory, hiring a cheese or butter maker to manufacture the milk into either product, charging so much per pound. It is sold on the cheese board and the farmer gets his returns. He generally gets his "cheese check" every month, which gives him a little ready money at all times. This is a great boon to more than the farmer, as the merchant gets more in cash sales, which also helps him to buy for cash, which in turn enables him to sell a little cheaper. Pork raising is not as generally practiced as formerly. The farmer finds he cannot successfully raise pork without milk, and he thinks he can make a little more out of cheese or butter than he can out of pork.—[E. R. Brow.

Manitoba's Wheat Crop, including the Territories, according to Sec'y S. A. McGaw of the Dominion elevator company, who has been in Manitoba 15 years, will probably run a little short of 15,000,000 bu as against 21,000,000 last year. There will, he said, be no suffering, although merchants may have to carry over some of their country accounts. In 1899, he said, the average yield was 12 1/2 bu p a. In 1900, 21 bu, in 1895, 28 bu, and this year it will be about 7 bu. Commissioner of Agriculture Davidson of Manitoba says the yield per acre over the province will not exceed 5 bu p a. Much will be summer fallowed which will put the soil in unusually good condition for next year's crop. The N P R report a decided improvement in the appearance of growing grain. From Morris, Baldur, Belmont, Hilton, Brandon and Elgin districts, it is reported that the wheat will yield 10 to 12 bu p a, while Minto district will give 15 to 20 bu. Harvesting will be general next week.

Nova Scotia—Crops with the exception of hay are looking exceedingly well in Cumberland Co. Old meadows are light and pastures have been poor and are now drying up. A good rain would be very beneficial although the

grain and root crops have suffered very little yet. Some of the largest growers have cut their hay but it was very green to late July. Stockers are raised quite extensively as a by-product of the dairy, but a great many are brought in from the back districts at 3 and 4 yrs old in the fall and fed through winter on roots, corn and marsh hay. Holstein yearlings are gaining ground both as a general purpose and dairy breed. Crops in general at Amherst promise well but are late. A heavy snow fall in plowing time last autumn cut us off in our fall plowing which, with a backward spring, made late with seeding. Haying fully 10 days late and the crop a little below the average. Grain promises extra well as do potatoes. A dry spell just as turnips were being planted prevented seeds starting well, but are doing well now. Corn is not grown much except for green feed and silos are few. Early frosts prevent proper ripening of corn, which has caused dairymen to turn attention to oats which can be raised in abundance.

Dominion Appropriations by the last parliament for agriculture, for the year ending June 30, 1901 include \$7,000 as aid to agricultural societies, experimental farms 80,000, printing reports and bulletins of farms 4,000, commissioner's branch for agriculture and dairying 40,000, for promotion of dairy interests by advances for milk and cream and for making butter and cheese, to be recouped out of the proceeds of sales of such butter and cheese, to be placed to the credit of the consolidated revenue fund 60,000, cold storage on steamships, railroads, at warehouses and creameries, and for expenses in connection with trial shipments of products, and for securing improvement and recognition of the quality of Canadian farm products 100,000; quarantine 156,000.

SILOS Round, of Any Size, and all Machinery Needed. G. D. Harder, Cobleskill, N. Y.

\$\$\$\$\$\$ COUNT

Inferior Salt means a loss in dollars when used in butter or cheese.

Windsor Salt

makes it sweet, keeps it fresh, brings higher prices.

TAX IT.

DEATH TO LICE on hens and chickens 64-p. Book Free B. J. LANBERT, Box 374, Apponaug, N. J.

Wanted, Farm with stock and tools in exchange for first-class renting property. HAWLEY & BUTLER, Springfield, Mass.

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General Debility

Day in and out there is that feeling of weakness that makes a burden of itself, Food does not strengthen, Sleep does not refresh. It is hard to do, hard to bear, what should be easy,—vitality is on the ebb, and the whole system suffers. For this condition take

Hood's Sarsaparilla

It vitalizes the blood, gives vigor and tone to all the organs and functions, and is positively unequalled for all run-down or debilitated conditions.

Hood's PILLS cure constipation. 25 cents.

BUY ONLY THE BEST.

If you wish to bale the most hay in the shortest time; make the most compact and even sized bales; get the most in a car and thus save freight, USE THE



Made in St. Louis and Iowa. Made entirely of steel, combining lightness, strength & efficiency. Largest feed opening—perfectly safe to feed. Easiest to handle at work or on the road. Illustrated catalogue mailed free. COLLINS PLOW CO. 1115 Hampshire St., Quincy, Ill.

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Warranted the lightest, strongest, cheapest & fastest Full Circle Baler in the market. Made of wrought steel. Can be operated with one or two horses. Will bale 10 to 15 tons of hay a day. Write for description and prices. GEORGE ERTEL CO., QUINCY, ILL.

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SILO PLANS AND SPECIFICATIONS "BOOK ON SILAGE" By Prof. F. W. WOLL. The book is neatly bound into a volume of 234 pages and contains everything that is latest on the subject from planting and building to feeding. Among the principle topics are included: I—Silage crops. II—Silos. III—Silage. IV—Feeding Silage. V—Comparison of Silage and other Feeds. VI—The Silo in Modern Agriculture. Also illustrations and complete plans for round and rectangular silos, dairy barns, tables of compound rations, etc. Mailed for 15c. coin or stamps. SILVER MFG. CO. Salem, Ohio.

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For 1, 2 and 3 horses, with governor; level or even tread. Catalogue free.



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4 Buggy wheels with tire on, \$7.25. With Axles Waxed and Set, \$11.00. I make all sizes and grades with Steel or Rubber Tires. Send for catalogue giving prices on wheels and tires. 7-12 and with extra tires, for ordering, Rubber Tire Hangers, 64c. Send Your \$1.00 Special Grade Tires for repair work for a 25-cent refund, if you write to-day. W. H. BOON, Carterville, Mo.

The Poultry Yard.

POULTRY IN HOT WEATHER.

Keep the fowls comfortable in hot weather. Shade, cleanliness and pure water are an essential trio to successful summer poultry keeping. Shade is wanted only during the hot weather, but cleanliness and clean water are needed at all times. Where fowls have free run they will find shade, but when yarded it must be provided for them. Tall growing weeds make the best shade, and some poultry keepers allow golden-rod to grow in the lower end of the yards. This grows tall and the fowls do not eat it, while they prefer its shade to that of trees or bushes. Plums are one of the best trees to plant in the yards and bring in an added revenue from the fruit. When there is nothing of this kind in the yards put up burlap or canvas shelters.

The water must be kept cool and pure. Fowls do not relish warm or filthy water any more than their keepers. The water dish should be kept in a shaded spot and refilled frequently. Meat must be fed carefully in warm weather and not at all if spoiled. Skimmed milk is much relished and makes a splendid food. Be careful of the mixed foods and take pains that they do not sour. The same grains that are fed in winter are needed, but less corn, of course, and it is better to have it cracked. Keep the house as open as possible, take out the windows and put in slat doors. Whitewash the house frequently, use kerosene or liquid lye killer on the roosts and powder in the nests which should be changed monthly.

PUTTING EGGS IN COLD STORAGE

Many million dozen of eggs are annually put in cold storage during the summer when the price is low, to be taken out a few months later as soon as the advancing prices and decreased supply of fresh eggs assure a profit. The eggs are bought of dealers throughout the country and shipped to large cities that have suitable cold storage facilities, such as New York, Chicago and Kansas City. The eggs are first carefully sorted and graded by expert candlers, then packed in cartons holding 30 doz. and placed in large refrigerators where the temperature and moisture can be controlled. The best temperature is between 28 and 30 degrees Fahrenheit, but below 25 the albumen will congeal and the shell crack.

The candling is done in a dark room under electric light. Every egg is passed before the light to see if it is good, and all cloudy, cracked, dirty and small eggs are rejected and sold for other purposes. A dirty egg is as sure to spoil as a cracked one. As many million dozen are used for manufacturing purposes, there is a market for the cracked ones. Some industries use only the albumen or whites, while others use only the yolks. The eggs are so carefully assorted when put in storage that they are not handled again when taken out if they have kept well, but when there are some that mold or spoil they have to be candled again. More money has been lost in storing eggs than has been made in the business. Yet the profits are so alluring that many speculators are always ready to try it. Only chemical cold storage can be successfully used for this purpose.

CARE OF GUINEA PIGS.

These little animals are strictly pets and no relation whatever to pigs. They are similar in habits and disposition to rabbits and should be treated about the same. Keep in warm, dry hutches which must be cleaned frequently. Feed plentifully of fresh roots, vegetables and grains. The young should have soft food for a time and but little green stuff. Soaked peas and beans are relished and boiled potatoes. Give water and feed twice daily only what they will eat up clean. They are very prolific, and the young, which are three to five to the litter, are born with eyes open and well-covered with hair. Wean them at six weeks old, taking one away at a time.

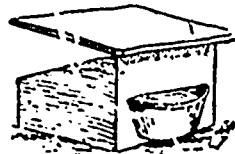
For Nest Boxes, nothing seems to be more satisfactory to hens than kegs, which may be had for the asking at almost any hardware store. A hole large enough to admit the hen, is cut

in the staves, about 6 in above the bottom, and a nest of cut straw or dead forest leaves put in. They may be placed under the roosting platform at all times. If a hen takes possession of one with evident intention (sitting during the proper season, the whole can be picked up at night, carried to the brooding room, and supplied with eggs. These kegs are readily removed at any time for cleaning.—[G. A. Martin, N. Y.]

Young Turks Die—A Me subscriber asks why her young turks die, although she gives no symptoms, hence it is impossible to state what may have been the trouble. In R I we are always suspicious of the disease which we term "black head." If any other cases occur, the birds should be opened and examined. The disease commonly called black head shows in the enlargement of the caeca (or blind guts) and also in the liver; the former becoming thickened and the latter being mottled with spots of brownish, yellowish or perhaps greenish color. It has been suggested as a precautionary measure that the turkey roosts, and especially the droppings, should be disinfected early in the spring before the young turkeys are hatched or old ones introduced. A liberal use of slaked lime in the yards is recommended. A disinfectant which may be used consists of crude carbolic acid 1/2 gal and crude sulphuric acid 1/2 gal carefully mixed together and diluted with water in the ratio of 1 to 20. This is quite corrosive and care should be taken to protect the eyes from accidental splashing.—[Prof. A. A. Brigham, R I Exper Sta.]

A Water Fountain

Water in an open, unprotected vessel soon becomes soiled and very warm. Cool, clean water only is fit for poultry and can be kept cool and clean by the device here shown. A box is fitted with a



carefully hinged and sloping cover that projects over the sides. An opening is cut in one side which permits a third of the dish to protrude. Turn this side away from the sun. Chicks and fowls cannot soil the water or spill it when thus located.

Do Not Permit Overfeeding. thus making your fowls sluggish, but feed them regularly with a proper amount of food. It is the hen that is active and constantly scratching and searching that lays the greatest number of eggs.—[O. D. Shock, Berks Co, Pa.]

Meat for Fowls—Fowls in confinement need meat. When at large they can pick up an abundance of animal matter in the form of insects and worms, but they are deprived of this when yarded. Green cut bones are the best form of meat if they are perfectly fresh and sweet, but during hot weather most poultry keepers had better use some of the prepared forms of animal meal which do not spoil easily. Mix in the mash two or three times a week. A fresh sheep's liver or head is also good.

Dieting a Sitter—The first night that a hen shows her desire to sit by remaining on the nest after her mates have gone to roost, I remove her and shut her up and keep her there two nights and one day without food. By that time she is so hungry that when let out she immediately goes hunting for food and forgets all about the family she thought she wanted.—[Rachel Kay, Mass.]

The Barred Plymouth Rock is the breed for me, not because they lay the most eggs in a year, but because they have the most desirable general qualities.—[N. J. B. Va.]

It is said 3,600,000 doz eggs have been placed in cold storage for the winter months at Kansas City.

Will some one who has had experience in raising geese and ducks without a pond of water give directions about raising them from setting until ready for the market?—[E. H. J.]

The output of Kan creameries last year is estimated as worth \$950,000.

Lifting the Farm Mortgage.

A MICHIGAN PIONEER'S STORY.

In the fall of '62 I took my wife and two children, yoke of oxen, cow, 3 pigs,



2 hens, a wagon and some provisions and left my old home in Genesee Co, N. Y. Drove 60 miles to Detroit, took boat to Glen Arbor, Leelanau Co, landed on the dock Saturday at 3 o'clock and moved in an old house. As I had never worked on Sunday I rested, and Monday morning took my axe and cut out two miles of road through the woods to the land that President Grant gave me if I would make a home of it, and we have lived here ever since. I at once cut some logs and rolled up a log house, made shingles to cover it with, and in 10 days moved in it (with no door or window), the happiest man that ever lived, because my little home was my own and I was out of debt. I wish I could say I continued free of debt.

That winter I chopped 3 a of heavy maple, beech, ash and barwood, and cut and drew 150 cords of wood to Glen Arbor (three miles); paid \$20 a ton for hay, \$30 a ton for ground feed, kept the cow mostly on browse, and came out in the spring free of debt. Burned brush and piled logs, and before they were burned 50 apple trees, 5 pear and 5 cherry trees, were bought and ready to set out. Chopped holes among the roots when I set out my trees, and did not lose one. Sold the first load of apples that was ever sold in Glen Arbor, and every dollar that I could spare since then went for fruit trees. Cleared the land by burning the timber as fast as possible, for in those days there was no market for logs, and cut wood winters to clothe the family. (some of the time paid 40 to 50c for calico). Raised enough to eat after the first year, when we had 40 a cleared. Had to begin back for the old log shanty would not hold all of the children that had come to live with us, and the log stable would not cover all of the stock, so we had to tear down and build anew. And with building, clothing and schooling the children, and some years poor crops and buying tools and improving the stock, we seemed to get a little in debt each year. So we held a council of war and decided to hire \$375, pay the little debts and make some improvements. This was in 1885. That mortgage ate out of the same dish with us, but we paid the high interest for five years of poor crops. Then we had two years of good fruit crops and lifted the mortgage.

We do a mixed farming, but we get our money from the orchard and Poland China hogs, fattening about 10 a year. The orchard consists of 12 a of all kinds of good fruit, with 400 peach trees and a few apricots. Have 70 a cleared, good fences and good buildings.

There have been many heavier mortgages than mine lifted here with nothing but potatoes. There are many fields of 5 to 20 a. Many have also made more money than I have. One mistake was in trying to raise wheat too long, one in not setting more fruit trees sooner. But, thank God, we lived through it, and I can now set in the big chair and look over well-tilled fields, and look over some of the children's farms, and play with grandchildren ad infinitum. A poor man now can do better here than I have done for there are good roads, mills, schoolhouses and a market for all products, and a daily mail, whereas when I came we only got war news once in two weeks carried on an Indian's back.—[W. B. M., Lennawee Co, Mich.]

I have been reading the long list of "mortgage lifters," and being a farmer myself for 38 yrs and having five in family, and we can live economically on \$600 per year, but these "mortgage lifters" turn in the whole amount of their crops on their debts. Will they explain what they live on?—[G. O. Holmes, Ore.]

The Colorado Harvest—The general harvest began Aug 6 to 11. The barley fields will be the first to be cut; then will follow the wheat fields. The grain crop will be the largest ever gathered in the state. The heavy spring rains, coupled with an ample water supply for irrigation, gave an abundance of moisture and small grains of all kinds got a good stand. The excessive hot weather and drouth of June and the early part of July did not appear to have any evil effects. The grain stands high and the heads are well filled. The corn and potato crops are coming on finely under the good influence of showers during the last weeks of July. The first cutting of alfalfa was heavy and was put into the stacks in the very best condition imaginable. The second cutting will be much lighter, and damaged by rains while in swath. The small fruit crop is abundant, but apples do not promise so well, the orchards not having fully recovered from the severe winter of '98 and '99.

Do not be afraid to give your horse a little green grass occasionally, but new hay should not be fed.

One Dollar

placed in our hands will place in yours (freight prepaid) the very best possible instrument for dissipating darkness, viz: a

Dietz Crystal Lantern

Heavy square tube-frame, simple anti-fuss side-lift, glass non-leaks' oil font, burner and globe securely locked down. As for it, it furnishes a veritable flood of it—indeed 'tis an open question which is "lightest" the lantern or its cost. Shall we m. you (free of course) our little Lamp Booklet?

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81 Lighthouse Street
Established in 1840, New York

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All Sales Direct from Factory at First Price.

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AFTER HARVEST, FENCING.

Now that your crops are all in, you will have time to attend to that fencing. The best fence you can have is **THE ADVANCE FENCE CO.** It's the one that is sold direct to the farmer at wholesale prices. Nobody can buy it cheaper than you can. Don't get it elsewhere. No loose ends. Circulars and special discounts free.

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Steel, Rods, and Wire used in Page Fences. Cut down the prices, and can furnish promptly.

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25 different designs, they are all steel and cheaper than wood fence. Special prices to Churches and Cemeteries. Write for catalogue.

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A Typical New England Creamery.

The Dairy.

CREAMERY BUTTER MAKING.

The system of making butter in creameries or factories is in many respects a vast improvement over the ordinary farm-dairy practice—where the conditions are favorable a well-managed creamery is a source of profit to the farmers of the neighborhood and a real blessing to their families. But favorable conditions do not always prevail by any means, and many communities have suffered serious loss as the result of not making a thorough study of the subject before embarking in the creamery enterprise. The creamery plan or factory method of butter making is a positive advance and a permanent one. It will gradually supersede farm dairying in a great majority of cases in most of the states. The conditions and circumstances of every locality and the case of every farmer, should be studied, the advantages and disadvantages reviewed, and the question decided upon its merits.

A creamery having the capacity to handle the milk or cream of 300 to 500 cows can be built for \$800 to 1500 and the equipment will cost about as much more. It is possible to start a 250 to 300 cow creamery with an investment of 1500 to 2000, which may be increased with some advantage to 2500 to 3000. Much depends on local cost of materials and building expenses in general.

One of the most successful co-operative creameries in the Connecticut valley of New England is that at Montague, Mass. The association was organized in 1890 and began business in Oct., '91, the entire plant costing \$3750. Capital stock of 2500 in shares of 10 each were taken up mostly by patrons of the creamery, the balance is a mortgage. The illustrations herewith give a good idea of the exterior and interior arrangements of the building. The accommodations for receiving and storing cream and making and removing butter are ample and convenient. Ice can be easily moved from ice house cooling room. There is a good tenement for the butter maker and the front balcony shades the most exposed side of the workroom.

The upper floor has a porch running the entire length and 9½ ft wide. In the corner and above the three cream tanks in the basement is a receiving room for cream, 9x12 ft, with a pipe leading to cream tanks below. In rear of this room and over the ice box and cold room, is a storage room 9x9 ft. The other rooms of this floor are a pantry 7½x12, dining room 16x12, bedroom 7x12, parlor 14½x12, and kitchen 10x12.

An abundance of soft water is brought from a fine spring but a short distance in rear of the creamery and owned by the company. All waste is drained to a quick-running stream nearby, and the buttermilk tank is located at a sufficient distance, near the stream, and kept in good order. This creamery has storage capacity for 1000 gals cream and makes about 2500 lbs butter a week, working six days.

All the patrons have creamers or separators, about one-half of each now. The factory was operated on the "space"

system 4 yrs. Then, by vote of the stockholders and patrons, a change was made to payment upon the basis of butter fat, determined by the Babcock test. Much satisfaction and improvement followed this change. Two teams gather the cream. One has a route fully 30 miles in length, but makes the trip only four times a week. It has been found that the cost of bringing the cream from the producing farms to the factory is from 1 1/3 to 1 1/2c for every pound of butter made. The cream of every patron is sampled daily, in a composite samples made, these being tested two or three times a month. This creamery is located in a region from which milk is shipped to the Boston market, but the quality of butter produced is so good and its sales are so well managed, that the patrons receive as much for the cream of their milk as their milk-shipping neighbors do for their whole milk.

Montague creamery butter was among the first trial shipments of high grade butter sent to England by the U S Dept of Agri 3 yrs ago, in the endeavor to enlarge the market for choice American butter. A shipment was also made in early summer for the Paris exposition, in tubs, and other shipments in prints and granules are to be made soon. A most favorable official report has been made of that already sent, says Manager A. M. Lyman of the creamery. "There is one very favorable thing I have noticed for a long time. Where good creameries are established farms are more productive and the farmer is more prosperous than where milk is sold off the farm, or even cream, for there is a certain pride that comes from sustaining the creamery in making a fine product. It is a very good thing also to co-operate in it; it is more elevating to the community and establishes the farmer on more business-like principles."

THE MAKING OF GOOD MILK.

Good milk possesses purity and a high content of nutritive matter. The purity of milk depends chiefly on the health and care of the cow, the character of the food used and the method of handling the product. It is impossible to secure pure milk from ill-kept animals, and ill-kept animals are less likely to be healthy than well-kept ones. The food used, which includes water, must also be good. Milk from cows fed partially decayed, or even musty foods will possess bad flavors, and will sour rapidly, and impure water may not only contribute undesirable taints, but also disease germs. Milk should therefore be drawn from healthy, clean, well-fed cows, by clean milkers, into clean utensils, and immediately cooled and aerated, after which it should be put into clean vessels and kept cool. A dirty stable a stall not perfectly sweet, a bottle improperly washed, a dairy room that is ill ventilated, in which the milk is cooled or stored, may each contribute something which decreases the purity, and hence the value, of the product as an article of diet.

Better Milk Prices seem to be in sight for producers in N Y, Pa, N J and western N E, owing partly to short supply, urgent demand and to the co-op-

eration of buyers in the union. New York city dealers have been obliged to advance their prices fractionally. The Five States' milk producers' ass'n shipping to that market has been endeavoring to establish creameries in the country, and convert the milk into butter and cheese, when this is more profitable than to ship in the raw state to the city.

Nearly every dairyman has experienced the shrinkage that comes in midsummer, when pastures dry up and grass is scarce. It is at this time that soiling will pay and pay liberally. In what better way can a person realize from \$23 to 25 a n a for green corn or green alfalfa? When the cows look over the fence with longing eyes at the corn, the efforts usually spent in keeping the cows out of the corn had better be spent in throwing the corn over to the cows. The green corn, alfalfa or cane growing alongside of the pasture will pay greater profits if marketed to cows in need of extra feed than if held and sold to the local grain dealer, and not only that but it will keep up the flow of milk and increase the profits derived from dairying on dry feed next fall or winter. The average result shows that it is possible to get over four times as much per acre by soiling as by pasturing. This does not mean that soiling always pays. It will depend largely upon the cost of labor and the amount of pasture land a person may have. Not considering the amount of land used, the cows did the best on pasture.—[Prof D. H. Otis.

The McCormick Harvesting Machine Co. of Chicago, has just received word from Paris that the Gold Medal and 200 francs, the single highest award for binders, was won by the McCormick machines at the field trial at Coulommiers on July 19, against all comers. This is the greatest and most important trial held in France during the exposition year.

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Canadian Farm Affairs.

THE PEA INDUSTRY.

I visited recently the large establishment of the Cleveland Seed Co of Prince Edward Co, Ont. Its situation near the entrance of the harbor affords easy facilities for shipment of the grain. Entering by the main entrance, one notices first the hundreds of bags of grain, tier on tier, and on every side, so that the immensity of the business confronts one at once. A large hopper is in the center of the first floor. The peas in it are carried through a shaft to a large funnel-shaped box on the next floor, where a man stands ready to prevent clogging. The grain falls thence through shafts to a lower floor. In the picking-room over 100 girls pick over the grain. Two girls are seated at each table, one on each side. The table is covered with a bag to prevent the wearing of the finger-tips. The grain falls through a shaft and is spread over the table. The poor grain is placed in a box at the right hand, and is crushed to make feed.

The sound grain is shoveled into a box at the end of the table, and is carried through a shaft to a lower floor where a bag is attached to its opening. When the bag is full, a man ties it and a truckman carries it to the pile to which that kind belongs. Each kind of grain is kept separately in the picking-room.

The seed company deals almost exclusively in peas, but of late, they receive beans also. Any farmer who agrees to raise seed for them receives the number of bushels he requires for seed free. He prepares the soil, cares for the grain properly and brings it to the seed house as soon as ripe. In the fall he receives back his seed grain and pay for the rest of his crop according to kind and quality. Of the 10 different varieties, the favorite is Harrison's Glory, a large green pea, and of the field varieties, the Kent yields the best. The price varies from 50c to \$2 p bu, the average 80c.

Of the beans, the kind that gives the best returns is a white bean called "1000 to 1." It is too early in the season to know the quality and prices. The farmers have given up trying to raise the lima varieties; either the climate or the soil is unsuitable. The grain is shipped to Belgium, France, Russia, Great Britain and to all parts of Canada and the United States. Since the establishment of this industry 11 years ago, it has steadily increased. Farmers of Prince Edward Island found that the growing of peas paid, and many in the adjoining counties of Hastings, Northumberland, Lennox and Addington send grain by train and boat to the seed house.—[Mrs Edwin Colquhoun.

PECULIAR LAND FORMATION.

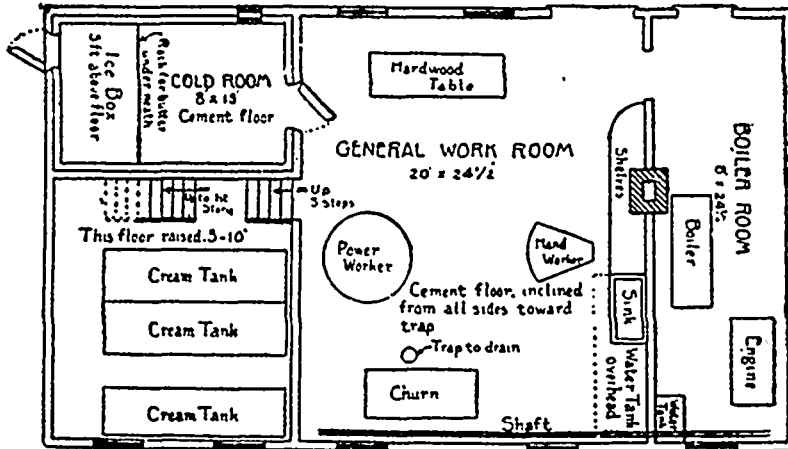
A belt of land of considerable extent is in British Columbia, where irrigation is in general use for the production of crops. The summer climate of that section differs but slightly from that of Ariz. The western margin of this region is less than 100 miles on a direct line from the Pacific, but the moisture laden clouds never pass the lofty coast of this country and its general aspect is the same as the cactus and sage brush of our southwestern desert. It is drained westward by the Fraser river, including Thompson river, the largest, and on the south by the Columbia. Kamloops with 3000 population is the most important settlement in this belt, being located at the junction of the north and south Thompson rivers and in the center of an important agricultural region. The valley is several miles wide at this point with bottom land rich in soil and extensive alfalfa, grain fields and orchards. This is essentially a great country and forage crops are chiefly cultivated. The grain and crops raised are for home use entirely.

The irrigation is in the manner of small primitive ditches which divert the waters of the side streams, springs and lakes which drain into the waters from the mountains. Irrigation ditches run along the terraces in some cases 100 to 600 ft above the level of the river. The excessive use of water has caused several landslides, which have changed the face of nature to no small extent, and within the last few years eight or ten landslides have occurred. Each landslide is a vertical drop or slump of 50 to 200 ft and immediately under or adjoining an irrigated field of large areas.

These fields are often tilted back at an angle of 45 degrees or more and inclined toward the mountain. The intervening ground moves forward to the river, the movement in one case being 800 and in other cases from 2000 to 3000 ft. One slide had a path 3000 ft long which left a vertical cliff half a mile long and over 100 ft high in a bowlder of clay formation. This land toboggan made a terrifying noise and was distinctly heard two miles away. The weight of earth which slid into the river approximated 70,000,000 tons.

The C P R has recently won a very important suit against irrigators in sections along this line. These landslides in the past have proven very costly to the company. Suit was brought and it was finally decided that the company could enjoin against irrigators at the point where landslides might be produced by lavish irrigation.—[C. J. Blanchard.

The Big Fairs will be held as follows. Industrial at Toronto, Ont, Aug 27-Sept 8. Great Eastern at Sherbrooke, Que. Sept 3-8. Western at London, Ont, Sept 6-15. New Brunswick at St John, Sept 10. Nova Scotia at Halifax, Sept



Plan of Creamery Basement Floor.

12-20, Central Canada at Ottawa, Sept 14-22. Other fairs are: Agricole Du District, at Three Rivers, Que, Sept 5-15; Ontario fairs during Sept, Brantford, 15-22, Richmond, 12-13, Peterboro, 18-20, Paisley, 25-26, Aylmer, 18-20, Collingwood, 18-21, Almonte, 25-27, Woodstock, 26-28, Picton, 25-27, Prescott, 18-20, Bowmanville, 13-14.

Nova Scotia—Crops in Colchester Co are if anything above the average. Spring was all of two weeks later than usual, but since seedling weather has been exceptionally favorable for growth, with results accordingly. Hay will be about 85 to 90 per cent. It is just a little early to forecast the other crops yet, although oats, which is our principal grain crop, look exceedingly well, roots are a little backward, owing to late sowing, and will depend on the weather largely for a few weeks. Stock conditions were never better. Farmers are awakening to the fact that the best sire procurable is none too good to use on their herds. A great deal is accomplished through agricultural societies, which are aided by government to the extent of dollar for dollar with their members subscriptions. This money is used in procuring pure-bred stock for the benefit of the members of the societies and has certainly proved of very great benefit to Nova Scotia. Another very important factor in our live stock interests is our maritime exhibitions, which serve not only an educational purpose but a grand opportunity to reach the farmers that want to buy, affording as it does customers a chance of inspecting the ancestry of the young stock offered them. There certainly should be a fair profit in raising young stock with our splendid pasturage and favorable climate. Colchester is essentially a dairy county. The factory at Truro handles some days as much as 14 tons of milk. The pure-bred stock business has probably advanced faster than any other branch of the stock industry. Not more than 20 yrs ago the government discussed the advisability of importing one or two pure-bred bulls, as there was not known to be any in the province. This last season since exhibition I have sold 50 pure-breds, a great number of them being used in our own province, and other breeders have reported equally satisfactory sales.—[C. H. Archibald.

The Hired Help Problem.

POOR TREATMENT DIDN'T PAY.

Have had poor success with hired men and good also. While I tried to get all I could out of them and was not particular how I used them, as I generally did until a few years ago, as I always paid high wages, thought I had a right to get all I could out of them, and as a consequence there was always friction. For the last 3 yrs I have tried a different plan. Determined to give fair wages and use my men just as I would like to be used, if I was working as a hired man. When hiring I give them to understand I intend to use them the very best I know how, and I expect them to do the very best they can for me. Tell them my rules, how many hours they will have to work per day, which is nine, for I think it better to have fixed hours and work the same every day, except in harvest, when we must all work all we can.

When working a team the help must take good care of the horses, and no other chores will be expected of them.

him his wages for the time he has worked and tell him you will need him no longer. There will be no difficulty in getting another man, for there are plenty looking for a good place.—[Nettle Fairbairn, Perth Co, Ont.

The Golden Rule—Do unto others as you would that they should do unto you, has been my policy with the eight men I have hired the past 10 years. Wife works on the same plan. My help does lots of extra work in garden and field after the days' work is done. Treat hired help kindly and as a rule the same will be returned. Be pleasant at all times and the help will soon take as much interest in the farm as does the owner. Kind treatment is always the best road to success.—[G. H. McKay, Elgin Co, Ont.

A Hired Man's Way—Am 21 yrs old and have hired out on my sixth year. The first 3 yrs worked for relatives and would not advise any young man to do so. Am now on my third year with a farmer who represented South Huron in the Ont legislature 20 yrs and have never had a quarrel with him. I go about my work as if I were doing it for myself and take just as much interest in everything as if it were my own. If I have any doubts about how work should be done I ask my boss about it and do it his way. Try in every way to please him and in return am used as one of his own family. Think this is the secret of my success as a hired man.—[L.M. Hunkin.

I always promise the current wages, pay punctually at the time promised and in the manner agreed on. Always use help in a respectful and social manner, as far as possible applying the golden rule of using them as I would like to be used if in their place.—[John McGeorge, Colchester Co, N S.

I don't dog my hired man around. He starts to work at 7 a m, quits at 12, takes a full hour for dinner and quits at 6 p m. I pay him \$20 p mo, and I allow him a horse and rig whenever it is possible to do so. We always treat him as one of the family.—[W. R. Richmond, Bothwell Co, Ont.

A DELIGHTFUL OUTING TRIP.

There are a number of very enjoyable water trips in the United States, but it remains for the Dominion of Canada to furnish the tourist with what is perhaps the finest inland water trip in the world. This trip is known as "Niagara to the sea," and is made on the boat of the Richelleu and Ontario navigation company. The trip covers 800 miles from Toronto, through Lake Ontario, the Thousand Islands, the exciting descent of the wonderful rapids of the St Lawrence river, Montreal, Quebec, the charming scenery of the lower St Lawrence below Quebec and the Saguenay river.

A trip which appeals with considerable force to the farmer and his family is that from Hamilton to Montreal on the Hamilton, Bay of Quinte and Montreal line, which is operated by the Richelleu and Ontario navigation company. This route takes the traveler through the beautiful scenery of the Bay of Quinte and Thousand Islands by daylight, and its semi-weekly service between these two points, either one way or round trip, is so reasonable that it would seem as though almost every farmer within a reasonable distance of the two starting points should make this trip sometime through the summer. The boats on the line of the Richelleu and Ontario navigation company are exceptionally large, finely built river boats, and the cuisine is unsurpassed. This navigation company furnishes the traveler with a number of slide trays, all of which will be found very enjoyable. It is needless to say that any tourist going from Montreal to Quebec would not think of going on any other route, save by the boat of this navigation company.

Canadian forests include a region about 44 times greater than England, which is 59,000 square miles. Any one of these 44 parts would furnish all the timber necessary for the requirements of a population of 5,000,000 people, and would leave the other 43 parts to be reserved for future use or for export purposes.

Separate the Sexes, especially the young stock, if you would push the bullets for winter eggs.

If not working a team and the horses are in the pasture, they will have to help milk or any other necessary chores. It is a mistake to keep men in the field a long day, and then expect them to do chores around for an hour or two. Half an hour of choring each morning and evening is enough. In this way I have had good satisfaction. The men generally respond by doing the best they can. I give them a half holiday to attend a picnic or anything going on once in a while, and when it is raining, without I have something they can do under shelter, let them rest. Of course I attend to my business and see my men do their work faithfully and well, for if the master is lax the men will be also. If I get a man that won't try to do well under these circumstances I get rid of him as soon as possible.—[W. Worden, Lisgar Co, Man.

USE AS CO-WORKERS

The secret of getting and keeping good men is the property of the prudent and thrifty farmer. I have been hiring help for most of the time during the last 10 yrs as a farmer and I find that by using them as co-workers with myself, they give all the satisfaction I desire. I hire them for help, not for slavery. My brother man who works for me requires a certain amount of time he can call his own after giving me a fair share of his time and labor. I also allow my help the enjoyment which the farm life can give them, and my motto is a fair day's pay for a fair day's work. I have found that by so doing, after a time my help is equally as interested in the success of my work as I am myself and when I am absent I know that my interests do not suffer any hereby. In a very short time I have confidence in the help I engage and when a mistake occurs a mild reminder always has the desired effect.—[J. McCharles, Victoria Co, N S.

The Best Man is the Cheapest—Always hire the best man you can find, even if it costs a little more money; it will pay in the end. Give every other Sunday and the legal holidays, and do not expect a man to work 20 hours out of the 24. Keep the golden rule. You have then done your part and if the man does not give satisfaction just pay

Business Side of Farming.

THE MODERATE WHEAT CROP

In the winter wheat territory from Pa and NJ westward to Okla and Tex the new crop is moving with considerable freedom. Farmers as a rule, however, are somewhat indifferent about accepting present prices and many of them will hold hoping for an advance. Flour mills are buying freely in Md, the Ohio valley, Tenn, southern Ill, etc. and there is considerable talk to the effect that the big mills in the northwest will be obliged to buy largely of Kan winter wheat. The export trade in winter wheat and flour is moderate but not urgent, and the market lacks particular animation with recent trade largely on the basis of about 75c p bu for the contract grade at Chicago, choice red winter bringing a premium over this figure.

Serious damage to the spring wheat crop of the northwest is everywhere admitted; the extent of this is a matter of disagreement. Following the severe drought of early summer generous rains have taken place, some claiming these brought at least partial recovery to spring wheat, others that they come entirely too late to be of any substantial benefit. Reports show that considerable areas here and there will not be harvested while other counties show a much better rate of yield than earlier hoped. According to the American Agriculturist Aug crop report the general average condition of spring wheat for the U S was 55.8 against 53.1 in July and 55.9 one year ago. A fair gain during the month is noted in S D and Minn, but returns indicate a scant third of a crop for N D where the drought conditions were worst. Popular estimates of a total spring and winter wheat crop of '00 are 500 to 525 millions compared with 565 in '99 and 715 in the bumper year '98, and 590 millions in '97. The wheat crop of '96 was only 470 millions.

DEMAND FOR MEAT ANIMALS.

All classes of live stock are selling well at such big markets as Buffalo, Pittsburg, Chicago and the Missouri river. Cattle are about as high as at any time in months, and hogs and sheep are active with all classes of buyers represented. Since pastures have shown an improvement there is a little more willingness on the part of farmers to buy stock cattle and sheep to place on grass, and they are buying at figures which seem comparatively high. In many cases it will require the best of management on the part of the feeders to put this stock in such shape as to show a profit when sent to the butcher's block next winter. The dressed meat concerns have bought cattle freely, owing to the good domestic consumptive demand and the strength ruling in the English markets. In fact the latter has greatly aided the export trade in live cattle, with liberal numbers clearing each week from New York and Boston.

Little row can be said on the hog trade, usual classes of buyers operating freely, swine selling at a narrow range of prices well above 5c in the big cities, country dealers endeavoring to load at 4 50/4 75. A good many western sheep are being marketed at Kansas City and Chicago, and possessing good quality sell readily. One day recently 1400 70-lb western lambs sold at Chicago at 5 80/5 85 p 100 lbs. The lambs going to market from Ind, Mich, Pa, etc, are only fair in flesh, selling at Buffalo at 6 00/6 25, choice lots a premium.

INTEREST IN CEREAL CROPS.

Has recently drifted to some extent into corn. Threatened disaster in the southwest during early July, by reason of hot, dry weather was modified by later thorough breaking of the drought, yet damage in many counties was serious and permanent. Outside of section named, however, the corn crop has made splendid growth up to early August, and providing no disaster overtakes it the crop will unquestionably prove a liberal one. Conditions have been almost perfect in some of the big corn states such as Ia, Mo, Ill, Ind, O, etc. The August crop report of American Agriculturist placed the general condition at 84.1 against 92.4 in July and 86.5 a year ago.

The falling off of 8 point was due to



A Ten Acre Florida Tobacco Field Under Cheese Cloth.

The covering consists of posts with securely set scantling. Across the scantling wires are stretched and over these cheese cloth is laid and fastened. The frame is 9 ft high. Sumatra tobacco raised under a covering of this kind has sold for \$4 p lb.

The lowering of condition in Kan, Neb and a few other states affecting the general average, while Ia and O each stood 99, showing practically perfect condition. It is too early to definitely estimate total yield, but the heavy acreage this year of 86,000,000 acres warrants the expectation of a crop of at least 2100 million bu. The realization of these generally good crop conditions has had its effect upon the corn market, which has shown a tendency to weakness, contract grade selling a shade under 7c p bu at Chicago.

The Summer Demand for Butter is normal and the market is healthy without particular animation. Early Aug found moderate quantities going into cold storage, but demand chiefly for consumptive purposes. Our export trade continues indifferent, having little or no appreciable effect upon values. Drought conditions hurt the pasturage in portions of the northwest also eastern N Y and northern N E, restricting the flow of milk and preventing the accumulation of butter. The output is nearly normal now, however, and dealers are enjoying a good trade. Markets without particular firmness.

The Off Season in Barley is nearly over, and with the coming of cooler weather millsters will show more interest. New crop is beginning to appear, the cheaper grades going for feed purposes with good malting barley quotable in Chicago at 40 65c p bu and at N Y 50c or better.

Low Prices for Oats—Recent transactions at Chicago around 20c p bu caused traders to ask if the market will work down as low as it did in '96 and '97 when No 2 mixed sold at 14 16c. The crop now being harvested is a liberal one, approximating 850,000,000 bu against 870 one year ago and 800 millions two years ago. In the Ohio valley and in Ia and Mo the crop is almost perfect, but in Kan and Neb earlier promise was followed by drought damage in July.

Interest in Hops is looking up and growers are a little more encouraged over the price prospect. The belief is general that the crop will not prove a heavy one either in N Y or the Pacific coast, and buyers are showing

more interest without making any particular advance in bids. In one sale sales have been made, to be delivered after the crop is harvested at 10c p lb, and the few transactions in the Mohawk valley have been made at 19c 11c.

Flax Growers are very much in the dark over the future of prices, and much will depend upon the manner in which the new crop turns out. For weeks speculators in control held the market at \$1.80 p bu for No 1 at Chicago, owing to the paucity of offerings. But since new seed has appeared quotations have been lowered materially to 1 40/1 42 and Sept delivery 1 35. The acreage for the crop of '00 is large, but the harvest returns in the northwest where drought was so severe in July are quite uncertain.

A Better Demand for Wool is reported in some of the big trade centers. Prices have shown no appreciable gain since the decline in the early part of the summer. The present hardening, however, may develop into possible advances a little later.

New Timothy Seed is appearing on the markets, the first lot received at Chicago coming from Ia and selling at \$3.60 p 100 lbs. A year ago the market for new seed opened at about \$2.50, thus indicating the present higher range of prices.

A Long Guess—Transactions are noted in year corn at 34c per bu. In other words speculators have contracted to deliver No 2 mixed corn in Chicago at any time between now and Dec 31 at the figure named.

Reduced Yield of Hay—Harvest is completed except for a second growth, and some of the alfalfa and wild hay returns indicating a yield probably much under that of two years ago and something less than last year. Preliminary estimates place the hay crop of the U S around 50,000,000 tons compared with nearly 60 in '99 and 65 in '97. Offerings of choice old timothy hay have been rather light, resulting in firmness, while the new crop has not begun to move in earnest. The harvest returns are more satisfactory in the Ohio valley, Ind, Ill, Ia, Kan and Neb than in

THE AMERICAN AND FOREIGN PRODUCE MARKETS AT A GLANCE

The highest quotations of wholesale prices for standard grades of farm produce in the leading markets of the world on the dates named, poorer stuff lower

Table with columns for Boston, New York, Chicago, Cincinnati, Norfolk, Minneapolis, St. Louis, Montreal, Liverpool. Rows list various commodities like Wheat, Corn, Oats, Rye, Barley, Flour, Cotton, Cattle, Sheep, Hogs, Veal calves, Poultry, Butter, Cheese, Eggs, Apples, Hay, Straw, Onions, Potatoes, Beef, Pork, Lard, Hides.

some of the older middle and eastern states, including Pa, N Y and N E. Fairly well distributed rainfall throughout much of the northern half of the country during July served to help-out the second crop and this may make it necessary to modify earlier estimates.

New Crop Pea Beans have been contracted at \$1.50 per bu for hand picked, Oct delivery, and 1.45 for Nov delivery for a b Mich shipping points. These prices are 50/60c below present market for old beans.

Manitoba Wheat Fields will have some surplus beyond local requirements in spite of weather vicissitudes. The minister of agriculture estimates the total yield at 11,000,000 bu.

July Receipts of Hogs at Chicago were the smallest since '96 when Aug arrivals were scant 500,000 head.

The Chinese Troubles and Cotton—Exporting annually to China cotton goods to the value of \$10,000,000, the cessation of this business owing to the fighting is serious. The outlet for this staple is curtailed, affecting the mills not only in the south but in N E. At Bldeford, Me, cotton mills shipping largely to China have closed temporarily affecting about 3000 operatives.

The Bucket Shops are having a hard time of it this summer. A large number of them located in Chicago have been raided by the police and numerous arrests made. To add to their discomfort the Chicago board of trade has shut off the quotations, making many of the bucket shops dependent upon the figures sent out from the N Y produce exchange.

Best Variety of Wheat—The O experiment for 7 yrs has planted 60 varieties on tenth-acre plots and manured each exactly alike. Penquite's Velvet Chaff was planted on every third plot as a standard variety. The general results of the test for 7 yrs show the following sorts to exceed Velvet Chaff in yield: Poole and Mealy by an average of more than 4 bu p a each, Red Russian by nearly 4 bu, Nigger, Early-Ripe, Currell's Prolific, Gypsy and Egyptian by 2 to 3, Mediterranean, New Monarch and Democrat by 1 to 2, Bearded Monarch, Valley, Deltz, Lebanon and Hickman by less than 1 bu each. These tests have been made on a rather thin, somewhat sandy clay. On gravelly loams the Valley has made a relatively larger yield than that quoted above. No variety has proved exempt from attack by Hessian fly, but Mealy, Mediterranean, Fulcaster and Clawson seem to suffer less from the fall attack of this insect than most other sorts. The Ohio station has never succeeded in growing spring wheat.

American Farm Machines are in high favor in Europe. At a trial of various styles of reapers near Dollbergen, Hanover, in Germany, of local and foreign make, the Walter A. Wood machine company of Hoosick Falls, N Y, were awarded first prize gold medal on the work of their light reaper and two-horse tubular mower of 4 1/2 ft cut. This is indeed a high honor for the Walter A. Wood company. The machinery and implements of this enterprising firm stand equally as high at home as abroad and we take pleasure in commending them to our readers. Their catalog will be sent free to all F & H readers who write them for it.



An English Cross-Bred Guernsey-Shorthorn Cow.

Live Stock Interests.

A VALUABLE CROSS.

Dairymen of this country are demanding a cow that shall combine with good dairy qualities sufficient size to give her a good commercial value in the open market. Long experience has shown that such an animal is most desirably secured by the use of a Guernsey bull on good-milking, high-grade Shorthorn cows.

Over 20 yrs ago the late Lewis F. Allen of New York, one of the greatest students of stock husbandry and a very successful farmer writes: "My own experience thus far in the use of grade Guernsey cows sired by Guernsey bulls and from high-grade Shorthorn cattle is altogether satisfactory. Altogether of Shorthorn grades, Guernsey grades, younger heifers and heifer calves, my herd numbers fully 100, of which about 10 are from Guernsey sires, thorough-bred bulls. The Guernsey grade heifers usually bring their first calves at from 20 to 26 mos old, and give within a month or two after dropping their first calves 24 to 40 lbs of rich milk per day. All of them have large, square udders, sizable teats, and are easy and gentle milkers. Such cows easily sell for an average of \$60."

There are many Wis dairymen who recognize this fact and a trip through that state will clearly show the great esteem for cows of this breeding. Not only is this true in this country, but the dairymen of England fully appreciate it. In many herds of full-blood Shorthorn cattle, one will find Guernsey cows kept to aid in giving richness and a natural high color to the dairy products. Recently a Guernsey-Shorthorn cross-bred cow has won great recognition in England. The London Live Stock Journal says of the cow, "The cross-bred cow, Nancy, the property of Mr George Long, again secured the champion honors at the recent dairy show. Nancy has only been exhibited four times. At the London dairy show, where 4 yrs in succession she has won first prize in the milking trials, and the lord mayor's cup for the best cow outside the Shorthorn and Channel Island classes. Three years out of the four she obtained a medal for her butter yield, but was just beaten by another cross-bred in 1897. Besides being the champion twice she was a fairly good second in '96, being beaten only by a fraction of a point, the figure being 136.6 against 137. In '97 she took third position for the championship. The following figures denote the amount given in one day by Nancy for butter, and the average of two days for milk.

Year	Milk yield, lbs	Butter yield, lbs oz	Points	Butter ratio, lb
1896	63.9	2 5 1/2	136.6	26.02
1897	60.3	2 3 3/4	134	27.44
1898	65.2	2 6 1/2	137.5	25.81
1899	63.1	2 11 3/4	135.7	25.05

The above figures and awards go to prove the usefulness of this cross, viz, Guernsey and Shorthorn. With regard

to the inspection prizes, Nancy has always obtained notice from the judges, and this year she was deservedly placed first in her class. Also in the milking trials at the dairy show in 1899, the Barham challenge cup of £50 goes for the second time in succession to the same cow. She is a splendid all-round cow, both in appearance and in performance."

The Guernsey grade is growing in popularity every day and justly so. The reasons are easily found. They are docile, healthy and pleasant to handle, have good udders, good teats and are large, persistent makers of high-colored, rich milk.—William H. Caldwell, Hillsboro Co, N H.

Canadian Dairymen have an organization they may well feel proud of, being second to that of no other organized branch of farming. Canadian dairymen's associations are active in the acquisition of knowledge, in the manufacture of dairy products; transportation of same to market has interested their efforts in a co-operative way and its sale to consumers has engaged its especial care and consideration. The dairy farmer is ahead of all other farmers in his understanding of the value of organized co-operative work, and the wonderful advance and steadfastness of his industry in Canada and the states shows the value of such co-operative effort.

Barbecued Meat is not cut up. A pit is dug in the ground, large enough to cook an entire carcass or half of a carcass. This pit is filled with wood and burnt until it is very hot, usually seasoned hickory or oak is used. After the pit is made thoroughly hot, green poles are laid across it, the carcass placed upon them, and the red hot coals run under the meat. The meat is then turned and cooked until it is "done." During that time it is basted with a mixture of vinegar, spice, salts, pepper and such other condiments as may suit the taste of the operator. Good seasoned wood that will give hot coals is usually used. It requires 24 hours to heat a pit and cook a large quantity of carcasses. The annual agricultural camp meeting and fair of the N La exper sta will be held at Calhoun, Oct 3 to 5, with a barbecue, when over 100 carcasses will be served to the public. [Director W. C. Stubbs.]

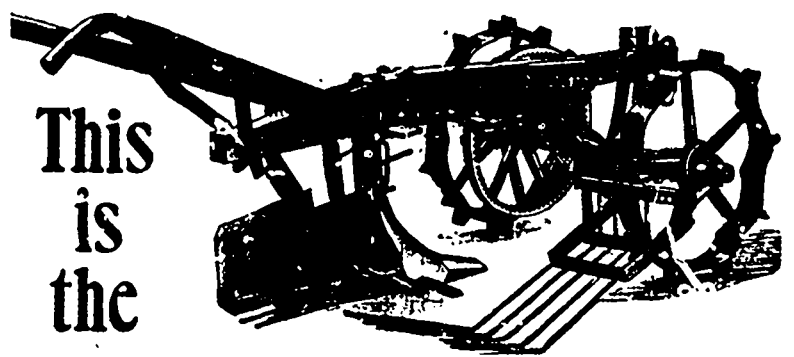
Horses Are Higher, some 20 per cent, than a year ago, says a western horseman. There have been 10 horses shipped east to one exported from the Pacific coast. Good drivers and heavy draft animals are in especial demand. At the beginning of hard times and low prices, ranges were overstocked with a cheap grade and farmers throughout the country were well supplied with young work stock. For a period of several years breeding ceased almost entirely and the range bands were allowed to go to pieces and die off during winters. The period of a horse's useful-

ness with reasonable care on a farm is from 6 to 8 yrs. This time has elapsed and farmers are now compelled to get new stock. This, combined with the big eastern shipments during the past 6 mos has been the immediate cause of the present increased prices. The July sales of horses at the St Paul horse market exceeded anything in the history of the yards, more than 25,000 being sold. They were disposed of at the rate of 40 carloads an hour, the buyers being from all parts of the country, a few foreigners being represented. The majority of these horses are from the ranges of N D and Mont. The bidding was sharp and prices ran high, showing a good demand, which though prevailing for several months, has never reached present proportions. The sales at the St Paul horse market during the past 6 mos put it in the lead as the chief market in the United States. More than 100,000 animals were disposed of. Of this number the Northern Pacific brought to St Paul from the ranges 50,000.

Eastern Farmers Will Raise Beef—For several years western ranches have

had a monopoly of beef raising, but the tables are now slowly turning. The rancher's pastures are dried and eaten up and advancing civilization closes him in. Beef cattle are up and the time is almost ripe for the eastern farmer to stock up with the beef breeds. The advances made in economical feeding since the eastern farmer stopped growing beef make it possible for the eastern farmer to grow beef on equal terms with his western competitor. There is good money in sight for the eastern farmer who stocks up with Shorthorn, Angus and Hereford cattle. Ensilage corn will go far toward solving the problem of feeding.—[J. A. McDonald, P E I.]

Sorghum should never be fed cattle which is yellow and wilted. Cut sorghum and let it lie some time before feeding. Sorghum is one of the best annual midsummer forage crops that can be raised in Neb. The use of healthy sorghum for pasturage with ordinary precautions, and of sorghum hay, is safe.—[Prof T. L. Lyon.]



This is the

"WONDER" POTATO DIGGER

Will do satisfactory work in dry or wet ground or among green vines. Digs every row, leaving the ground level and the potatoes on top. It is light draft for one team strong, durable, simple.

We absolutely guarantee that this digger will dig your potatoes as you want it done. You need not pay us a cent until you have proved this in your own fields (deposit the money with your banker or postmaster).

Write for full particulars.

THE YORK DIGGER CO., YORK, PA.

SUCCESS
Gilt Edge
Potato Harvester

is positively guaranteed to give satisfaction. We want every potato grower to give it a trial.

It will cost you nothing to test it in your own fields.

Write at once for description, prices and full particulars.

D. Y. HALLOCK & SONS,
Box 311, York, Pa.

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THE ONLY TOOLS YOU NEED.

We have on hand 2000 squares BRAND NEW STEEL ROOFING. Sheets either flat, corrugated or "V" crimped. Price per square of 2x10 feet \$1.75 or 100 square feet.....

No other tool than a hatchet or hammer is required to lay this roofing. We furnish with each order sufficient paint to cover, and nails to lay it, without additional charge.

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W. 35th & Iron Sts., Chicago.

FIRE, WEATHER, and Lightning Proof

Black, painted, or galvanized metal ROOFING and siding; (brick, rock or corrugated)

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Talks with Our Lawyer.

Questions for Our Legal Adviser are answered in turn, but on account of the large number of queries received it is often some weeks before replies can be printed. In case an immediate answer by mail is desired, \$1 should be inclosed. Subscribers to eastern edition should address the Springfield Office, western edition readers, Marquette Building, Chicago. Gardner & Burns, 26-28 Marquette Building, Chicago, have charge of western edition legal inquiries; for the eastern edition Charles H. Beckwith, Esq. of Springfield, Mass.

HOLIDAY LABOR—C. Vender. A farm hand is hired by the month, must he work on holidays? In the absence of any understanding at the time of the hiring, the question must be settled by a consideration of circumstances and the nature of the employment. If his duties were understood to be to feed cattle, then such service he would have to perform holidays and even Sundays. But if his duties were to get in hay, a court would probably hold that the parties intended that the laborer should have his own time on a holiday.

RIPARIAN RIGHTS—N. Mich: A and B own adjoining land. Water flows from A's land on B's land. Has B a right to build a dam on his land which will set back on A's land the water which would otherwise flow on B's land? No. A has a right to have the water flow off his land so long as it does so naturally.

TENANCY—Va Subscriber: Your tenancy being from year to year, 3 mos' notice may be given by either party to terminate the tenancy.

TRESPASS—N Y Subscriber: No land owner is obliged to let the public use a footpath across his land. He may fence it up and post a notice warning off trespassers.

OPTION ON LAND—D. F., Pa: Whether or not you are now bound by the option you gave on your land depends on the terms of the option. If by it you were to hold the land for the purchaser until April 1, you are not bound now if it has not yet been purchased.

DEED—N J Subscriber: A deed of land conveys the house upon the land. A purchaser of land can make a tenant at sufferance move.

FENCE—Pa Farmer: When both owners of adjacent land improve the same, both are bound to erect half of the line fence or to contribute equally thereto.

POLLUTED WATER—J. C., N Y: Your neighbor above you has no right to pollute water running through his land and then through yours. You have a right to receive the flowing water in its natural state. If you do not, you can proceed by injunction or suit for damages.

DAMAGES—A. M. G., N Y: Your husband's son cannot recover for digging a cellar on your land, he having done so without any request to that effect by you.

MINOR'S SUIT—L. Wis. A boy under 16 has his hand cut off by a machine in a factory. Can this minor bring suit for damages? If the circumstances were such as to give him a cause of action he can sue, by his guardian or next friend.

PLUCKING FEATHERS—M. J. F., Mass: There is no law now in Mass prohibiting the plucking of feathers from live geese.

TENANCY—M. Tenn. Your contract of tenancy is binding and if you can prove it you will be all right. No particular number of witnesses. The one witness who will corroborate your testimony will probably be sufficient.

RIGHT TO VOTE—N Y Subscriber: A foreign born inhabitant, of N Y 21 yrs of age can vote after he has been a citizen 10 days.

HOUSEHOLDERS RIGHTS—Mrs L. Mass: The holder of a town brook sewer fills a house cellar. What are the rights of the householders? He can sue the town.

MILLER'S TOLL—What a miller shall get for grinding a grain is a matter of contract, not of law. He can collect the amount agreed upon or in the absence of agreement a reasonable compensation.

LEGACY—Mich Inquirer: If you are left a legacy subject to the collateral inheritance tax of N J, the tax will be deducted from your legacy before you receive it unless the will provided that the executor was to pay taxes on legacies out of the estate.

PROPERTY RIGHTS—Geo. Your husband has a right to manage his own business until he is judicially determined to be incapable, unless he consents to place his affairs out of his own hands. He may transfer all of his property to a trustee and let him manage his business.

Our Veterinary Adviser.

Questions for this department are answered in turn, but on account of the large number of queries received it is often some weeks before replies can be printed. In case an immediate answer by mail is desired, \$1 should be inclosed.

BOG SPAVIN—E. S. (Mich) wants to know if a bog spavin or thoroughpin will cause lameness if present since birth, and is there a cure. Bog spavin and thoroughpin are the same only in different localities. Bog spavins that are present at birth and remain on the horse until he is five or six years old cannot be removed and do not cause lameness. A bog spavin caused by strains or injuries can usually be removed. Mix biniodide of mercury 2 dr. hard 2 oz. Apply a little once every second week until the swelling disappears.

SWELLING—B. F. J. (Ariz) has a horse with a swelling on its withers. Mix 2 dr cantharides and repeat in two weeks if needed. If it should break and discharge mix 1 dr chloride of zinc with 1 pt soft water and inject a little twice a day.

LAMENESS—S. E. T. has a horse that is lame in its fore feet, he does not seem to have any life. Mix 4 dr cantharides with 2 oz lard, rub a little around the coronets, let it remain on 24 hours and then wash off. Repeat the blister every second week until cured. Also mix 4 oz sulphate of iron and 2 oz nux vomica, divide into 24 doses and give one once a day in bran mash until all are taken.

LOSS OF MILK—J. H. has a heifer that was giving a good quantity of milk; all at once she seemed to dry up, she appears well. Give 1/2 lb epsom salts and 1 oz ginger dissolved in water at one dose; also rub the udder well three times a day with camphorated oil.

ECZEMA—F. L. has a horse that has a disease of the skin and rubs the hair off the affected parts. Wash well with soap and water and dry. Mix 2 oz ichthyol with 2 oz vaseline and rub a little of this well into the skin. In four days wash again and dry and rub on a little more of the ointment and so on until cured. Also give 1/2 oz doses of nitrate of potassium at a dose twice a day for a week in mash.

PLEURISY—H. L. W. has a cow that is sick and stiff in her fore parts; there is also a swelling under the jaws and on the brisket. The cow has pleurisy, which will likely cause dropsy of the chest and around the heart. Give 1 oz tincture of iron at a dose three times a day in 1 pt gruel. Also give 2 dr iodide of potassium at a dose twice a day in 1 pt cold water.

FOOT LAMENESS—A. B. has a mare that has been lame in one of her forefeet for over a year. Such lamenesses are very difficult to cure. Mix 4 dr cantharides with 2 oz lard, rub a little around the coronet once every second week and continue for several months. Do not work or drive her while under treatment.

SWOLLEN LEG—T. M.'s mare has a swollen leg. Bathe it well for half an hour three times a day with hot water and after each bathing rub it well with a little soap liniment. Also mix 4 oz sulphate of iron and 4 oz nitrate of potassium together, divide into 24 doses and give one at night in a bran mash until all are taken.

CHAT WITH THE EDITOR.

Editorial and Columbian are two good red raspberries for planting in N Y. S. D. I can buy them of the nurserymen advertising in F & H Seed plants set 25 to 30 or very early in spring.—W. J. D. There is no way of retaining old canneries this so it will pay, the process is too expensive.—M. M. To avoid consigning your wool to middlemen, you should correspond with the nearest woolen manufacturer, sending a fair average sample, stating amount you have available for shipment. For price of popular wool, address Lake George Mill, Ticonderoga, N Y, or International Wool Co, 11 State St., Boston, Mass.—G. R. asks what a young and ambitious farmer can do on a 20-acre farm day after he has read the last issue of F & H. The editor would suggest that he write F & H a good, newsy letter describing the farming conditions of his section, condition of crops, stock, etc.—Mrs M. J. H.: Die back of orange trees is in most instances due to injury of the root hairs. This may consist in their decay, which occurs if water stands around the roots, or it may consist in their drying up, which occurs if the soil becomes too dry. The prevention of die back lies in correction of soil moisture conditions. All drainage if too wet and irrigation if too dry. You must die down several feet to ascertain the facts in each case.—J. C. R. Large size feed cookers are sold by Heppner Bros of Tecumseh, Mich.

If farmers would band together into one solid body for the lowering of taxation and the betterment of their condition, they would find taxes would improve wonderfully for them.—[Gearyville (Ind) Subscriber.

Horticultural Matters.

CRANBERRY ROT.

According to the N J exper sta, cranberry growers sometimes meet with difficulty in the shape of berries rotting on the vine in whole areas at a time when other and neighboring areas are producing an abundance of whole and healthy fruit. Analysis of samples of the soil of bogs producing healthy and unhealthy fruit and of the vines and fruit showed that the bogs on which the berries rotted contained less clay and silt (and iron and alumina) and more nitrogen than those which produced sound berries. The vines which produced rotten fruit contained less phosphoric acid and potash than those which bore good fruit. The analysis of the rotten fruit also indicated that potash and phosphoric acid and, to a smaller degree, lime are essential to a healthy growth of the cranberry.

It has been suggested that in view of these results, together with the good effects from the addition of clay to many bogs, which contributes to both their mechanical and chemical improvement, that in the case of rotten bogs a liberal application of phosphoric acid and potash might, in part at least, correct the deficiencies which are shown to exist in the soils and vines from bogs producing rotten fruit, the phosphoric acid to be drawn preferably from natural guanos, or from basic slag phosphate and the potash to be in the form of sulphate.

Profuse Blooming Oxalis—These bulbs can be made to bloom for 6 mos if properly cared for. Pot in rich soil and give much more water than is usually given them. Once a month all winter give liquid fertilizer or dig bone meal into the soil. Plants which have stopped budding can be started again, by proper feeding and watering.—[Mrs H. M. W., Ill.

Rapid Grading of Apples—The quickest way to grade apples is to measure how much smaller in circumference they are than the given size by holding them in the hand as described below. It is quicker than any method of calipers or rings that I have seen. Pick out an apple of the smallest size that is to be packed in a given grade. Hold it by its stem end in the left hand and grasp it around the middle with the right. Then note carefully with your eye the distance between the end of your finger and your thumb. This distance is your gauge. When you pick up an apple that looks too small, grasp it as above shown and judge in a moment. A few trials will get the exact size so fixed in the mind that the application of the test will become less frequent as grading progresses and perhaps finally cease entirely.—[M. G. Kains.

Cucumbers are a crop that require extra care and but few can raise them successfully. They should be planted on good, warm, sandy soil, with a southern exposure and should be planted in rows, not hills. When planted in hills the roots are hunched up too much, but when planted in drills they spread over the whole area and are better nourished and more easily cultivated, nearly all of the work being done with the horse cultivator or wheel hoe. Cultivation should begin as soon as young plants appear above ground, and continue as long as possible without interfering with the vines. There are no insect pests or diseases to trouble them as yet here.—[C. E. Flint, Whatcomb Co, Wash.

The Cauliflower requires a moist climate, although we succeed with it in Ia in an unfavorable climate. It may be raised by forcing or raising in the open ground. For forcing, put the seed in hotbeds, early in March, and transplant when 2 in high, with temperature of about 55 or 60 degrees F, retaining uniform temperature at night by covering. Keep constantly moist and shade in hot middays. Cultivate the crop thoroughly and it should be ready in about 2 mos. Open ground culture requires a colder frame to harden plants for transplanting. When the ground is warm enough, set plants 2 1/2 ft apart. After all cultivation is done, hill with cultivator in the 3 ft row to cover the roots and keep moisture for a greater length

of time, as dry weather is a serious drawback in midsummer. Without cultivation the plant will not come to perfection. While dampness is essential, too much water is also detrimental. The ground selected for planting should be fertile and well drained. American grown seed is preferable to the imported.—[W. S. Fultz.

Calery Leaf Blight prevails more generally during a wet than a dry season, especially when heavy rains are followed by extremely hot days. With conditions favorable, it quickly spreads from plant to plant until the crop is ruined. White Plume and Giant Pascal are less subject to attacks of blight than other varieties. The disease first appears as small rusty spots on the foliage; this should at once be removed and burned. Spraying with a very weak solution bordeaux mixture should be begun at once, spraying each week at first. After two applications, a liberal watering with liquid manure should cause plants to make a healthy start. Some use a spray of sulphate of copper instead of bordeaux, 1 oz sulphate to a large pail of water.—[E. Elliott.

Peach Leaf Curl may be prevented with an ease, certainty and cheapness rarely attained in the treatment of any serious disease of plants, and there is no longer a necessity for the losses annually sustained from it in the U S, says bulletin No 20, by the pathologist of the U S dept of agri.

Placing Rocks Around Fruit Trees—Mulching fruit trees of all kinds is beneficial. The object of the mulch is to keep the ground above the roots cool and moist. There is much work in placing a mulch of grass, leaves, manure or loose soil about trees and replacing it when required. As good results will follow if stones are piled around the trunk of the tree, not coming within 1 ft of the trunk, and extending from 3 to 4 ft in each direction. Stones will keep the ground cool and moist and will not harbor injurious insects and pests.—[J. L. Irwin, Nemaha Co, Kan.

For an Early Melon—The S D exper sta planted 125 varieties muskmelons and 154 of watermelons last year. Good, ordinary cultivation was given and no fertilizers were applied. Planted May 21 killing frosts occurred Sept 16. American varieties of muskmelons as a class yielded a large crop and none of the 100 imported varieties equalled them in earliness or productiveness. The first fruit was picked Aug 15 and several varieties did not ripen fruit at all which leads the station officials to believe earlier maturing varieties are needed. The station will save seed from the earliest melons of the earliest ripening varieties and see if it can get a melon that will ripen several days earlier. If started under glass, there is no difficulty in getting a good crop.

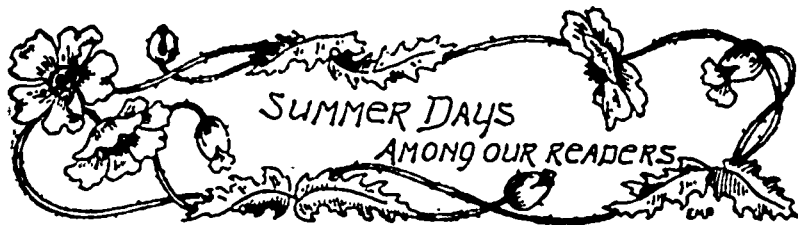
Keep Cool in the house by opening the doors and windows at night and keeping them closed during the day.

Some apple orchards consist of 7,000,000 trees in bearing and 2,365,000 not in bearing. The average per cent of crop, from 22 reports from 34 counties, show 54 per cent of an average crop. Orchards of tried varieties that have been properly cultivated will this year pay a good profit to their owners in every county of the state. All our people need is a better knowledge of what to plant and then exert effort to plant it and properly care for it.—[Sec'y W. H. Barnes, Kan Hort'l Soc'y.

It is estimated that nearly 700 carloads of peaches will be shipped from Del this year. Shipments of early varieties have already begun.

Self-sterility of the variety probably explains the failure of many vineyards or blocks of grapes to bear perfect crops. Many grapes are incapable of producing fruit from their own pollen as are plantain strawberries; and they require as pollenizers not only varieties which bloom at the same time, but varieties which are themselves strongly self-fertile.

The earliest native peaches placed on the Boston, Mass, market brought the grower \$2.50 a bu; they were the Ramon cluster.



SUMMER DAYS AMONG OUR READERS

Fair Peddlers—Remunerative novelties at a recent fair were Miss Priscilla Prim, Madame Rossetti and Mr Smiles, who in appropriate and attractive costumes mingled with the crowd and readily disposed of their useful articles. Miss Prim, as a Puritan maiden, carried a variety of handkerchiefs attractively displayed on a tray suspended from her neck by a ribbon. Madame Rossetti, dressed in the picturesque costume of an Italian peddler, carried on one trip bundles from the various tables, and at another a tray of tempting fruit. Mr Smiles as a London dude, with cane and eyeglass, created much sport and at the same time found ready purchasers of the handsome neckties carried in the same manner as were the wares of Miss Prim and Madame Rossetti. In this way, articles that might have been left over were brought to the attention of all, the result being that not a necktie, handkerchief or bundle remained unsold at the close of the fair. [H. M. R.]

Heat Rash and Blisters—Every mother knows what the hot summer brings in small ailments not big enough for a doctor's advice, but sore enough to wring tears of real pain from childish eyes. For many of these hot-day aches, there is nothing like homely medicines. The terribly inflamed mosquito or wasp bite will cool and the swelling subside when bathed for long patient minutes with cold water in which a teaspoonful of baking soda has been dissolved. The small boy with his tender body burned from bathing under the hot sun will never forget the relief he feels when his mother wraps about him bandages wet in scalded buttermilk. I'll bet the mother of Whittier's barefoot boy drew pain out of wounds in the hardened soles by plasters of raw salt pork. It isn't an elegant poultice, but it has a certain efficacy which sucks poison from a nasty wound and helps a sore throat. Sometimes prickly heat brings grown folks as well as children, to the verge of craziness. At the first appearance of this summer scourge, sponge the body in a dilution of salt water and alcohol. Mix equal parts of water and alcohol, having first added a handful of salt to the water. Keep this mixture on hand and tightly corked all summer. It takes the pain out of a tired, lame back as well as the fever from prickly heat. For the dreaded cramps, hot ginger tea with a half teaspoonful of baking soda gives quick relief. [L. G. C.]

Keeping Summer Boarders—It must be borne in mind that people go into the country for health and recreation. In the first place, the house must be well situated, the greater the altitude, the better. Drainage should be perfect, and outbuildings not too near. There must be shady nooks for hammocks. Sleeping rooms should be clean and comfortable. Mattings with rugs make the best floor coverings. Use muslin or cheese-cloth for curtains and provide screens. Have good mattresses, springs, plenty of pillow-cases, sheets, towels and blankets. Before the arrival of your guests, fill water pails and have soap and towels in place. If you can spare two parlors, leave one of them uncarpeted and use rugs that may be removed for dancing or games on rainy days. Point out places of interest. Take your guests for a drive occasionally. Be thoughtful of their pleasure as well as their comfort. A daily mail is an absolute necessity. The dining room should be cool, with windows and doors well screened. City people want wholesome and well-prepared food served attractively, especially milk, cream, eggs, fruit and vegetables. Fresh meat must be served at dinner, but the poultry yard and furnish some of that. Do not serve the same kind of meat two days in succession. Utilize left-overs. Cold meats can be made into croquettes or pasties for tea, also some kinds of fish. Nearly all cold vegetables make good

salad, the others may be used in soup. Always serve the dinner in three courses with soup for the first. For desserts, jellies and light puddings with whipped cream are better than pie or heavy puddings. Fresh fruit should be provided in abundance. Ice cream and sherbets are enjoyed. Serve cereals for breakfast. Steaks or chops are not always necessary. Eggs, chipped beef in cream, creamed codfish or broiled fish give variety. See that the coffee does not stand after making, and is strong. Serve cream with cereals and coffee, even if you must cut down the butcher's bill. Above all, do not ring the breakfast bell too early. Most city people do not care to breakfast before six o'clock. Occasionally, serve supper on the piazza or under the trees. Sandwiches, coffee, ice cream and cake make a dainty tea served in this way. Avoid monotony in every way if you would please your guests. Employ plenty of help, see that nothing is wasted, take a little time to mingle with your guests, study their likes and dislikes, and place your price for board high enough to cover all expenses and leave a little margin. [A. B. W.]

Labeling Cans—Laughable and oftentimes humiliating blunders are made by the housewife because of the similarity or the misplacing of the cans in which she keeps seasonings, spices, etc. This sort of thing is easily avoided. Give the cans a coat of Japan varnish and with a small brush and light colored paint, print the name of what the can is to hold. This can be read at a glance, and it will not be necessary to open and taste of a half-dozen cans whenever you go to the shelf for anything. Labeling cans will save much in temper as well as flour. [Maud Steiny.]

Picking Sage—Gather the largest leaves only, pick when entirely free from damp, and dry in the shade. If none of the small leaves are picked, the sage bunches will soon be ready to pick again. Treated thus, sage is of extra strength, worth twice as much as when carelessly picked and dried in the sun. Keep all blooms picked off and cultivate and enrich around the roots. Do not cultivate deeply. All herb leaves should be gathered and dried in the same way, and the blooms kept picked in order to preserve their full strength. [E. C.]

Crimped Hair, which was so fashionable a few years ago for children, is now seldom seen, and little girls are not made uncomfortable during their sleeping hours by the tight, close braids that were necessary for this style of hair dressing. A pretty way for little ones is to part the hair in the middle for girls, and a trifle to the side for boys, then cut it to just reach the shoulders and curl the ends. Comb with a coarse comb, and the curls will look fluffy and natural, and form an artistic framing for the face. To make the curls, divide the hair into two parts and roll only a few inches at the end on soft flannel, which will not hurt the child's head. The hair should be washed frequently with castile soap and warm water and occasionally a little glycerin should be rubbed on the scalp. [D. R. S.]

Keep Children out of the sun. It is wasting breath, the constant command to children to keep out of the sun. While they are at play they don't know sun from shadow, and yet a doctor will tell you half the hot weather ailments of children are caused by the sun beating on their unprotected heads. Instead of scolding, and the coolest, shadiest corner about the farm and convert it into a playhouse for the youngsters. I saw an ideal spot of this sort the other day. There were half a dozen thick pine trees in a clump and beside them ran a fascinating brook just deep enough to cool little ankles. Early in the summer, the father of the reticent half-dozen spent one day there, and

by a carpenter, and the children have lived nearly every day there since. About eight feet up one straight limb a ladder leads to a platform, with cunning rustic seats and a low table. Below are swings, a comfortable hammock, a sand box and a delightful carpet of pine needles. At one side where the afternoon sun would send in rays hot as Tophet, is a funny little playhouse, as large as a good-sized hen-coop, and behind it a screen of rustic lattice-work literally embowered with the quick growing Japanese hop. The playhouse beneath the vines belongs to the little girls, the circle in the trees to the boys. Generally in the afternoon, you will find the mother there with her sewing. Pine trees and a brook are not available on every farm within sight of the house, but it is impossible not to find a shady corner somewhere, a place the children will consider their own and where they will play contentedly in the shade. [I. G. C.]

Dutch Cheese Profitable—In 1896 my husband and I found ourselves on a farm of 75 acres, three miles from a thriving little village. We kept six cows and had a quantity of milk left after feeding the pigs. One day I announced that I was going to try making Dutch or cottage cheese and selling it. My father laughed at me and my husband said he would be ashamed to offer skim milk for sale. But I was determined, so made two pounds April 4 and my husband sold it for me. The manufacture and sales were kept up until the latter part of September and brought in between \$18 and \$20. Sometimes my husband sold it for me, but often I marketed it myself. Perhaps you would like to know how I put it up. After I had a nice curd, I added salt, butter and a little cream, worked it thoroughly, then shaped it into half-pound balls. These were cooled, carefully packed and sold for 5c apiece, or 10c a pound. I am sure there is a chance for many farmers' daughters and wives to do the same, where they live near enough to a city or village to make it practicable. [G. L. Carrigan.]

A Quiet Game—Here is a nice quiet little game that usually captivates all the young folks. For the girls: Write on bits of cardboard such words as truth, a smiling face, a new gown, a carriage, a piano, a wheel, a story book, a typewriter, a nice hat, gold, an automobile, a necklace, a library, and so on; for the boys: A horse, a new suit, a farm, silver, a yacht, a team, a mine, a railroad, a new house, an incubator, a thousand dollars, etc. Turn down the cards and each girl selects one from her collection, each boy draws from his collection. When all have drawn they talk of the advantages that will accrue to him or her as the result of the choice, what they will make, or pursue, or give, etc. supposing the card represents the object itself. [Breadwinner.]

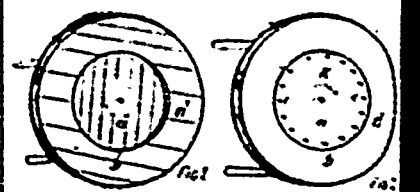
A Bathroom might be fitted up for summer by taking one of those small chambers common to farmhouses, which are often used only for the storing away of things for which there is ample room in the attic, and whom know but that the family would find it so convenient that when cold weather came a stove would be moved in, in which a fire might be kept one day in the week, if not oftener, so that the whole family might be able to take a bath? It might take a few extra cords of wood, which is wasting in the woods, or an extra ton of coal. We can buy the largest wash-tub to be had, a foot-tub and a good-sized baby's or children's bath if need be. Then, with wash bowl and pail, a tin pail for carrying water (tin is not heavy like wooden pails), sponges, soap and towels, will be all that will cost much, unless it be a small sink with spout and pipe to carry off the waste water, which can be easily arranged by a man of the family. Each one will doubtless be obliged to bring from the kitchen hot and cold water, as it would not be possible to build a cistern or bring running water into the room at small expense, but that might be added later. An oil stove or lamp would be convenient to have in the room for summer use, and a kettle of hot water might be kept on the stove in the winter. If there are no moves in the other chambers, it might pay to keep the stove running all the time and use it for a general dressing room. The room may

be carpeted or plain, with a piece of oilcloth under the large tub, and wash stand, table, chairs, etc. can be brought from the attic. [Alice E. Pinney.]

Hot Weather Helps—One who has to work in the hot sun should put several large green leaves in the crown of the hat, changing them at noon. A few years ago I lived where the mercury sometimes reached 110 degrees, and had been even known to rise to 118 degrees. Water was hard to get, and ice impossible. I learned to keep drinking water cool for the field in this way: As soon as you pump the water into the jug or pail, wrap several thick pieces of cloth about it (including cover), fasten and wet thoroughly. Set in a shady place, and keep the cloth wrappings wet. Instead of lounges in the dining room for the men to lie on during the noon hour, put hammocks under the trees or in the porch. Hammocks even in the house would be much cooler than lounges. Get things nearly ready for breakfast as you can the evening before. Then while you are getting breakfast, you can bake pie, cake or custard and not have extra fire. I do not make many pies and cakes when there is plenty of fruit. Fresh fruit is more healthful. By the way always gather fruit and vegetables in the evening or the cool of the morning. The cooler the housewife can keep the less fatigued will she be. Wetting the head in cold water occasionally helps. [R. J. M.]

Outdoor Work—When we went on our farm our riches consisted of a sweet little daughter, youth, health and experience, making it necessary that all our resources be used to the best advantage. We kept six cows, a horse, pigs and fowls, and raised early vegetables and berries. All that summer I did a boy's work, leading horse to cultivator, etc. picking vegetables and berries, riding rake and making out loads in haying time, weeding onions, etc. besides taking care of chickens and making butter for village customers. We were very happy and prosperous, the outside exercise giving me healthful sleep with no thought of nerves. A dear old aunt looked after baby in return for services rendered her. I had no help in the house, aside from an occasional churning on a rainy day, emptying of wash-tubs when "the man" was at hand and bringing in wood. But we were so content to let well enough alone, so the next year a boy was hired, and I took boarders, presumably more womanly but the care and worry completely broke down my health. We spent more in doctor's bills that winter than all my earnings amounted to, and it was several years before I called myself well again. I learned my lesson,—that for one farmer's wife, at least, light outdoor work was no hardship, but a help both to purse and health. [R. F. W.]

Revolving Dining Table—Fig 1 shows the table without the central turning portion, a being a grooved circle in which 18 small marbles are placed



(all the same size) on which the center A (Fig 2) revolves. A is grooved and the dotted circle a on the under side. A small bolt is in the center to hold steady. Fig 1 is made of inch lumber, top of table being two inches thick when completed. In Fig 2, A is made of two thicknesses of half-inch lumber placed crosswise. The bolt in the center is put through the first thickness only and does not come out on top. Porcelain knobs are indicated by c, which A is turned. Fig 2 shows the complete. The portion, a, is 15 inches wide. [W. A. Sherry, W. Va.]

Frittered Cucumbers—Pare and slice the cucumbers, add to them the beaten yolks of 3 eggs, level teaspoon salt, saltspoon pepper, and flour enough to make a stiff batter. Just before frying heat in the whites of the eggs, and beat, but do not stir the batter as they are added. Fry in butter and serve hot. [L. M. A.]



A View of "The Beeches."

Young America. The Beeches.

A TRUE STORY OF A DOLL HOUSE, WRITTEN FOR FARM AND HOME BY GERTRUDE OKIE GASKILL.

MARGARET and Edith Gaston are two little girls who live at their grandmother's in the country. They have no playmates of their own age except on Sundays, when three cousins come a long drive of 10 miles to spend the day at grandma's. As Margaret and Edith are too young to go to school, their mother teaches them each morning, and after the daily "study hour" plans some amusement to make them happy and contented; she teaches them to love plants and flowers by noticing the little ferns and vines and weeds, and to think that nothing God has made is beneath their notice, or to be despised.

One day in early springtime, Mrs. Gaston told her two daughters about an outdoor play which used to give her and a little neighbor endless pleasure throughout an entire summer and lasted until they were real "big" girls. She said that they should play it, too, and she would help them. The children were delighted and begged her to begin at once. True to her word, the following day Mrs. Gaston began making a little house out of a plain wooden starch box. No inside decoration was attempted, all her energy being expended on the outside. After three or four mornings' work, an attractive, "old colonial" house, in miniature, was the result.

The five small windows were supplied with tiny curtains, of narrow-hungry edging, which were tacked on before the panes of glass were fitted into place from the outside. The front door was made to open and shut by using brass hinges from cigar box lids, and though the inside of the house was quite devoid of contents, the attraction of opening and shutting the door was endless. The house was painted yellow, and while still wet dashed with sand, representing stucco, or pebble-dash. The eaves and trimmings were white, and a square portico was placed at one end. The roof was dull green, and the chimneys and dormer windows were fastened on securely with putty, which is not affected by the weather, and becomes quite dry and hard in a few days.

Now the little house was finished, there was nothing more to be done but to talk over plans for the grounds, and to wait for the real spring days to come when all hands interested might begin operations outdoors.

Unfortunately, spring was very late and Edith, who was a dear, foolish little girl, not much given to patience, said to her mother one day, "I think God must have forgotten to send spring to grandma's. I suppose 'cause there are so many places to see to." But Margaret while not much older, was much wiser, and in her own quaint way quite a deep thinker, replied angrily, "Oh, no, Edith, God doesn't forget; he just postpones. He's just waiting now for some Sowers and things to come up so's he'll know it's time for spring to begin." But as all things come eventually to those who wait, patiently or otherwise, spring at last really appeared and

mamma, who was as eager for the fun as the children, hailed the first warm, sunshiny day with delight, and started to the nearby woods with two baskets, two trowels and two daughters, hanging on her arms.

They found many tiny trees, but as the leaves had not yet put out, Mrs. Gaston was obliged to choose the kinds which seemed best suited for the little country seat by looking at the bark. Wild cherry, beech and cedar trees were at last decided upon, because the two former had the smallest leaves when full grown, and the last "because," as Edith said, "they look so like the big evergreens on grandma's 'lorn.'" Twenty or more were secured, then it was time to go home, choose the site, and plant the trees.

As they were slowly climbing the hill which led thence the shortest way Margaret said, "We ought to give it a real name, mamma, just like grandma's place." Mrs. Gaston entered into the plan at once, and suggested name after name, none of which seemed to suit Margaret. Then happening to look into the basket in her hand, a happy thought came to her, and she said, "Let's call it the Beeches."

They were so tired and hungry that they could do nothing more, so they put the trees in water to keep fresh until after lunch, when all, mamma, Margaret, Edith, nurse, Constance, and even dear grandma herself, went out to help. A nice location was chosen, not too sunny for the children to be able to play there through the hot summer days, and yet sunny enough to make the wood, flowers and vines and tiny shrubs, grow. Mrs. Gaston marked out the grounds, eight feet long by about five feet wide, by drawing a line with the spade. Then nurse did the digging, or most of it, because her foot was largest, and her shoe strongest, though all, excepting grandma, had a hand at it, or rather a hand and a foot; even Baby Constance took her turn.

They dug down a foot deep, and raked the ground as smooth and fine as if for a flower-bed. Margaret ran upstairs for the little house, and it was placed about the center of the lawn, and the trees were planted in clumps, wherever they looked best. Then everybody, except Mrs. Gaston, who called herself the "mason," hunted small stones, which they brought to her, and she outlined the place with them, partly sinking each one in a hole to keep it steady. At the front and side, she left an opening 10 inches wide, and placed higher, square stones to mark the entrance and exit to the driveway. By the time the stone wall was finished, they were heartily, healthfully, tired out, and almost glad to leave their work until another day.

To Margaret's and Edith's great disappointment, however, the following day proved cold and raw and rainy. They were not allowed to put even so much as their noses outside the door, much less "go and just look at the Beeches," as they pleaded a dozen times.

[Concluded in Sept 1 Issue.]

FROM OUR YOUNG AMERICANS.

Golf—I live in the suburbs and therefore enjoy city and country life together. We have a fine public library in our vicinity. My favorite poet is Will Carleton. I like to fish, hunt, camp and play golf. Why don't we ever hear of any golf players among the Young

Americans? It's a fine game, but no one thinks so till they have tried it. I would like Miss D. M. Scott for a sister and hope Old Maid will change her mind before long concerning boys. Come again, Wild Girl of the West.—[Robin Hood.]

Girl Bachelor—Don't be afraid of me, for although I graduated with the degree of bachelor of science from college, I do not belong to the old bachelors and would not for anything. Would you, "California Boy?" California Boy, your letter brought to mind a certain other "California boy" whom I had almost forgotten. His letters, so full of romance, adventure and praises of dear old California, made me almost wish I could live there too. We take F & H, and although we don't live on a farm, we all enjoy reading it very much. I always spend my vacation in the country and return to the city in the fall, only to think of the good times past, and eagerly anticipate their return. But, oh, how dreary must the country be in winter. I know I should die of ennui. I am learning stenography and like it better than school teaching or anything else. Why do not some of the boys and girls give their full names and addresses—[Eleanor Lunam (Seventeen), St Charles, Mo.]

A Nice Home—As I have never seen any letters from Canon City, I will try my luck in writing. I live about one mile from the mouth of the Royal gorge, which is a grand sight, and we have a beautiful town of about 7000 inhabitants. We also have the state penitentiary here and about 600 people wear the striped clothes. There is only one woman left. My father has a grocery store. There are three large schools in one district; they are named after three presidents, Lincoln, Wash-

ington and Jefferson. We live across from the Washington school. It has the high school. My sister graduated this year.—[Bessie Dickinson (Eleven), Colorado.]

QUICK CHANGE.

[Written for Farm and Home.]



The peas all grow in a long, straight row: And red pea-shooters were "ripe," you know.

And Neddy and Freddy Each had one ready: The peas looked so!



Close by some tough old squash vines grow: And two small boys will not go slow.

Ka-spat! Ka-spat! They both fell flat. The peas looked so!

GLADYS HYATT.

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WITH WOMANKIND

SEVERAL PRESERVES.

Quinces: Pare and core, carefully remove defective parts, cut into quarters or round slices. Put in a preserving kettle, add a little water, cover with a plate or tight cover to keep steam in, and boil until tender. Take out fruit, to every pound of juice add 1 lb sugar and boil 10 minutes, skimming well. Add quinces, boil ½ hour and pack in glass jars, pouring syrup over. Seal or close with waxed paper.

Peaches: Take large, ripe peaches, peel and quarter, crack stones and remove kernels. Weigh peaches and to each pound add 1 lb sugar, also kernels, and let stand in an earthen dish 24 hours. Put all into a preserving kettle and boil until soft, skimming carefully. No water need be added, as there will be sufficient juice in the bottom of the dish. Seal.

Crabapples: Wash fruit, put in a kettle over the fire and cover closely. Let simmer until the apples turn yellow, take out and turn into a large dish to cool. Pare and core. Put fresh grape leaves in the bottom of kettle, add apples and cook until tender, but do not let them boil. Weigh when cooked and to each pound of fruit allow 1 lb sugar. Place sugar in kettle, add just enough water to dissolve it, when melted place over fire, boil and skim, add fruit and boil until clear and soft. Remove to jars and pour the warm syrup over it.—[L. M. A.]

THE BENEFICENT ELDER.

Much can be said in praise of this beautiful shrub, the common American elder, *Sambucus Canadensis*, which lines the hedgerows and waysides in such generous profusion. There is no locality especially favorable to its growth, as it adapts itself to any place where the soil is moist. It flowers in June and July, maturing its fruit in August and September.

The European elder, though larger, is similar in its general characteristics and properties. But our elder, like some people, is so free and generous in its gifts, we do not fully appreciate it. If we had to pay a fabulous price for one, what a prominent position on the lawn would be chosen for it. How ardently its creamy blossoms and rich purple fruit would be admired. What other plant combines so many sterling qualities, symmetry of form, beautiful flowers, edible fruit, and the most stringent medicinal virtues.

A quaint, old-fashioned physician said "he always lifted his hat to an elder bush." Every part of it is said to contain healing qualities. In fact, from its starting of the tender leaf buds to the ripened fruit the elder is a veritable medicine chest. The bark and roots are useful, and obtainable at all seasons. Creams and lotions made from elder flower water have improved many poor complexions, while a warm drink made from the flowers is a mild stimulant, warding off colds and similar evils, causing soothing sleep. And perhaps the elder tree mother will bring you beautiful dreams if you drink two cups of elder flower tea, for this wrought the charm for the small boy in Hans Christian Andersen's Fairy Tales. The elder is not stinted of honors in Germany, as it is paid all the proper amount of respect due it there.

The expressed juice of the berries evaporated to the consistency of syrup is a valuable purgative. The flowers and juice of the berries are excellent remedies for scrofula, and erysipelous diseases. The inner green bark soaked in wine, steamed and beaten with lard forms a splendid ointment for cuts, burns, scalds, etc. Also the inner bark has been successfully used in epilepsy. Take it from branches one or two years old, scrape off the gray outer bark and steep 2 oz of it in 5 oz of water for 48 hours. Strain and give a wineglass every 15 minutes when the fit is threatening, the patient fasting. Many other remedies can be derived from the elder, but enough has been said to give a slight estimate of its value.

The berries are edible and much liked by some, although the taste, like olives, is usually acquired. They are very healthy and an excellent tonic, taken in any form. The following cordial the dear grandmother made every year: To 3 qts of fruit add 1 qt of water.

Allow 1 tablespoon each of whole cloves and cinnamon to each quart. Cook 20 minutes to ¼ hour. Strain and add 3 lbs of sugar to 4 qts of juice. Put in a jar, dip a piece of bread in yeast, place in the liquid and allow it to ferment. Then skim off the bread, put in bottles and seal. Keep in a cool, dark place for winter use. It is excellent served hot to those who have been exposed to inclement weather, preventing severe colds or worse illness oftentimes. It is not wine, but a highly spiced cordial, making new and pure blood, and building and toning up an enfeebled system. (Where yeast cakes are used instead of soft yeast, strain the cordial before sealing in bottles)

Elderberry jelly is quite an innovation, and one of which lovers of this fruit are very fond. Allow 1 lemon, rind and juice, to 4 qts of fruit. Make the same as other jelly. For pies, an easy and good method is this: Three pounds of sugar, 1 lbs of fruit, 1 pt of vinegar, boil 30 minutes. May be kept in non-sealing jars. Some can this fruit for pies for winter use, allowing 1 cup of sugar to a quart can. Cook 15 to 20 minutes. Some put the uncooked fruit in cans, fill to overflowing with molasses, and seal. They will keep well, and it is a very simple method for those who like the strong flavor of molasses. Season with spice to taste either of the preparations for pies when used.—[Sarah Rodney.]

UTILIZING THE PEACH.

With Apples Use ripe peaches and mellow apples in the proportion of three peaches to one apple. Chop small, place in alternate layers and sprinkle with sugar and pounded ice.

Sugared: Take ripe, soft peaches, peel, split in halves and remove stones; fill space with sugar, roll in sugar, put in a dish and set on ice over night. Serve very cold for breakfast.

A la Conde: Peel, cut in two and stew in clarified sugar syrup. Fill a mold with hot boiled rice, turn the form out on a dish, around which arrange the peaches, and decorate with preserved cherries or other small fruit. Mix ½ pt syrup with ½ pt marmalade, pour over and serve hot.

Pudding: Rub 1 oz butter with 1 pt flour, add ½ teaspoon salt and 1 teaspoon baking powder. Peel 6 large peaches, cut in halves, and take out the stones. Beat 1 egg until light, add to ½ cup milk and pour in the flour; beat well and pour in a greased pan. Lay the peaches over, stone side up, and fill the hollows with sugar. Bake in a quick oven, and serve hot with vanilla sauce.

Pyramid: Cut 12 large peaches in halves, peel and take out the stones. Make a syrup, dissolve 1 oz gelatine and stir in, fill a mold half full of syrup. Let stand until set, put in peaches, pour over more syrup and when well set, turn out on a flat glass dish.

Potpie: Put a plain pie crust round the edge of a pan, cut up peaches, put a layer in the pan, then a layer of sugar and nutmeg. Cover with crust and bake slowly 2 to 3 hours.

Butter: Peel ripe peaches, put in a preserving kettle with water sufficient to boil soft, then strain through a colander, removing stones. To each quart of peach add 1½ lbs sugar and boil very slowly one hour. Stir often, do not let burn. Put in stone or glass jars and keep in a cool place.

Dumplings: Peel ripe peaches, but do not remove stones. Sift 1 qt flour into a bowl, and rub in 1 tablespoon lard, add 1 teaspoon salt and 2 teaspoons baking powder; moisten with milk to make soft dough, roll out, cut in rounds, put a peach in the center of each, with a little sugar and cinnamon, place on a large plate, set in a steamer over boiling water for 40 minutes, and serve hot with cream sauce.

Marmalade: Peel, core and weigh the peaches. Cook slowly (uncovered), using as little water as possible. Extract the kernels from one-fourth of the pits and cut in small pieces. Allow 1 lemon for every 3 lbs fruit; carefully pare off the thin yellow rind, add to the kernels, cover with cold water, and steep slowly for 15 minutes. Strain, and set the liquor aside. Rub the fruit through a fine strainer, add ¾ lb granulated sugar for every pound of fruit; return to the fire and as it slowly comes to a boil remove the white froth. Squeeze the juice of the lemons into the liquor from the kernels, add to the marmalade, and cook 15 minutes longer.—[S. O. F.]

ALUM BAKING POWDERS.

CONGRESS ACTING TO SUPPRESS THEIR SALE.

The report of the senate committee on manufactures upon the subject of food adulterations and food frauds has created a sensation in congress and awakened great interest throughout the country.

If there could be published a list of the names of all articles of food found by the committee to be adulterated or made from injurious ingredients, it would be of inestimable value to the public.

The recommendations of the committee that the sale of alum baking powders be prohibited by law, will make of special interest the following list of names of baking powders which chemists have found to contain alum:

- BAKING POWDERS CONTAINING ALUM:**
- DRY YEAST** Contains Alum. Made by R. B. Davis & Co. New York
 - DAVIS'S O. K.** Contains Alum. Made by R. B. Davis & Co. New York
 - I. C.** Contains Alum. Made by Jaques Mfg Co. Chicago
 - PILGRIM** Contains Alum. Made by Piquam Baking Powder Co. Boston
 - BOSTON** Contains Alum. Made by Boston Baking Powder Co. Boston
 - WASHINGTON** Contains Alum. Made by Washington Baking Powder Co.
 - EGG** Contains Alum. Made by Egg Baking Powder Co. New York
 - A. & P.** Contains Alum. Made by Atlantic & Pacific Tea Co. New York
 - QUAKER** Contains Alum. Made by Quaker Baking Powder Co. Boston
 - GINTERS GOLDEN ROSE** Contains Alum. Made by Ginter Grocery and Produce Co. Boston.

It is unfortunate that many manufacturers of alum baking powders state that their powders do not contain alum. It is only right that consumers should have correct information as to the character of every article of food offered to them.

MAKE READY THE CANS.

Pears: Pare, halve if small, quarter if large, and remove the cores. Place a cloth in a steamer, put in pears, cover, set over boiling water and steam until tender, not too soft. While cooking, make a syrup of 2 teaspoons granulated sugar, more if desired rich, and 1 qt water. Add ½ teaspoon tartaric acid dissolved in a little water. Fill cans with pears, pour over the syrup, shake cans until all air spaces are filled with syrup, using the handle of a silver tablespoon to facilitate removal of bubbles. Seal and keep in a paper bag in the dark. The quantity of syrup mentioned is sufficient for two quart cans. Pears put up in this way never spoil if hermetically sealed.

Grapes: A new method which makes delicious sauce. Heat jars very hot by steaming over cold water gradually heated to boiling. Wring a towel from hot water, swathe the cans, fill with grapes picked from stems, cover with boiling water, seal and let stand 10 minutes. Open, pour off water, fill again with boiling water, let stand 10 minutes, open, pour off water, cover with boiling hot syrup and seal.

Spiced Elderberries: Take 4 lbs sugar, 1 pt strong vinegar, 6 lbs elder berries, 1 tablespoon ground cinnamon, 1 teaspoon each ground cloves and allspice in the vinegar until the strength is drawn out, strain, add sugar, bring to boiling, add elderberries, cook slowly 2 hours, stirring often to prevent scorching. An aluminum mat placed under boiling fruit is a great aid in preventing its adhering to the kettle.—[S. W.]

Frozen: Peel 2 lbs ripe, soft peaches and take out stones. Pound the kernels to a paste, add to 1½ lbs sugar, over which pour 1 qt water, boil 5 minutes, strain. When cold, mix with the peaches, mash and freeze.

Pickled with Plums: Take 3½ lbs peaches, the same of plums, 2 lbs sugar, 1 qt vinegar, 1 oz cloves and 1 oz cinnamon. Scald the vinegar and sugar three mornings in succession and pour on the fruit, the third morning scalding them together.

Tomato Soup: Four large tomatoes and 1 qt water, slice the tomatoes and let boil 15 minutes, add a piece of soda size of a pea, and while foaming add 1 qt milk, a piece of butter, salt and pepper, with some rolled crackers, let it boil up and serve.—[A. R. Annable.]

Teeth and Their Work.

CARE OF THE TEETH.

Teething is an event in every family that is anticipated with more or less solicitude; however, the eruption of the teeth is a natural process and ought not to be attended with serious results. With a weak and delicate body, unable to resist irritating influences, strict attention should be given to diet, pure air, bathing, exercise and sunlight, which, with the use of a good tooth wash, are the only medicines required. Parents should be watchful of the first teeth, as they have much to do in forming a healthy constitution. Mothers often neglect the temporary teeth, probably thinking that as they are only baby teeth which must eventually be shed, no care of them is necessary. But it is a most serious mistake to allow these teeth to decay or be prematurely extracted, as they control to a great extent the regularity, beauty and perfection of the permanent teeth. The eruption of the permanent teeth. The not as a general rule produce any unusual trouble, and their presence is often unsuspected. Parents should remember that the second teeth come while the first teeth are yet in the mouth.

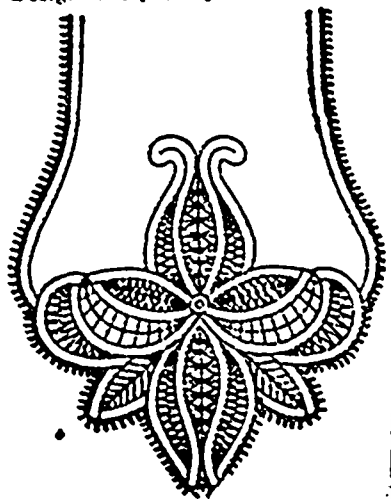
The six-year molars (first permanent teeth to appear) are in all respects very important teeth and should not be lost or allowed to decay if it can be possibly avoided. In youth the teeth decay much more rapidly than at any other period, except during sickness, and one of the very best remedies is a reliable tooth wash.—[J. B. H.]

Fish as Food—Farmers' bulletin No 55 states that in the specimens of fish thus far analyzed the percentages of phosphorus are not larger than are found in the flesh of other animals used for food. But, even if the flesh be richer in phosphorus, there is no experimental evidence to warrant the assumption that fish is more valuable than meats or other food material for the nourishment of the brain. Fish contains the same kind of nutrients as other food materials. It is essentially a nitrogenous food, and in this respect resembles meat. Neither fish nor meat is a source of carbohydrates. Oysters contain some carbohydrates, but the foods which supply this group of nutrients most abundantly are the cereal grains. Fish, meat, eggs, milk, etc. also cereals and vegetable foods, all supply fat, the amount varying in the different materials. Artificial digestion experiments with fish indicate that it is less quickly digested than beef, being about equal to lamb in this respect. However, as compared with other foods, the difference in digestibility of fish and meat is not very great. Actual digestion experiments with man show that fish is very completely digested, there being practically no difference between fish and meat in this respect.

Coffee Cake—One cup butter, 1 cup brown sugar, 1 cup molasses, 1 cup strained coffee (strong), 3 eggs, 1 lb seeded raisins, 2 cups flour and 2 teaspoons baking powder. Bake in a moderate oven.—[Lalla.]

BATTENBERG TIE END.

Designed especially for the reader



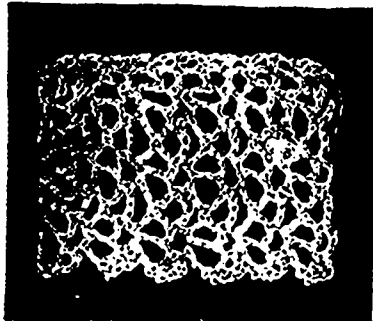
of F & H. Patter stamped on cambr Pattern Departmen

des. accord. A. of F & H.

STITCHES

WHEEL OF FORTUNE

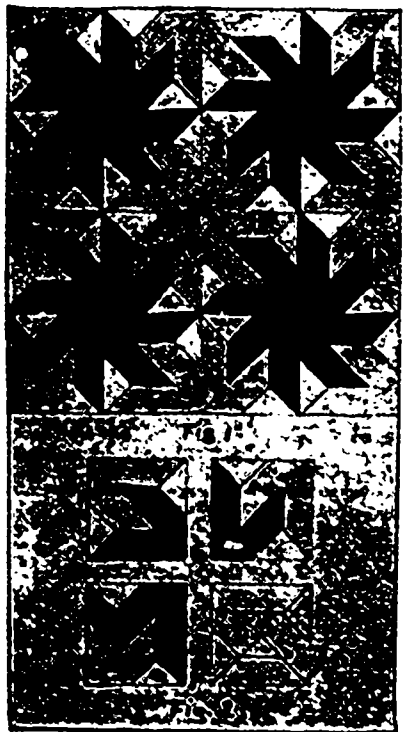
1st row—Ch twelve, turn.
 2d row—One double in 10th st, one ch, one double in 8th, * three ch, one double in same, three ch, one double in same, * double in 4th st, repeat between stars, double in 1st st, repeat between stars, three ch, turn.
 3d row—Fasten with sin e st in loop



last made, three ch, fasten in same loop, * three ch, fasten in next loop, * repeat between stars four times, one ch, double in double, double on top of ch, two ch, turn.
 4th row—Double in double, one ch, double in first loop of three ch, * three ch, double in same loop, * repeat, double in 2d loop of three ch, * three ch, double in same loop, * repeat, double in 5th loop of three ch, * three ch, double in same loop, * repeat. Continue by repeating 3d and 4th rows.—[A. R. M.]

INTERLOCKING WHEEL

This design is apparently very intricate, but when analyzed it is found to have an extremely simple unit. It is composed of only two forms, a small triangle and a four-sided figure whose geometrical name is a trapezoid. The lower right-hand square of Fig 2 shows the outlines of a single block, omitting the dotted lines which aid in drawing the pattern. The arrangement of the four squares of the same figure shows the method of joining the blocks, which are all exactly alike, each con-

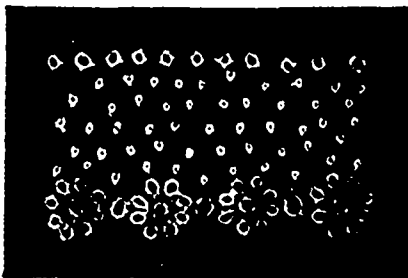


taining two triangles of the pale tint, two trapezoids of the medium tint, and two trapezoids of the dark tint.
 Draw a square a little larger than the finished block is to be and inscribe its two diagonals. Measure off on one of the diagonals a b, Fig 2, the length of the side of the square, and from b draw d c between the two diagonals and parallel to the side of the square, and d e parallel to the diagonal. The outlines of the two working patterns will then be drawn ready for use.
 This design was used for a silk sofa pillow-cover, the colors being white for

the triangles, a yellowish brown for the medium-tinted wheels and peacock blue for the dark wheels. The result was most artistic. It is a pattern that can be used on a small scale for small pieces of patchwork or on a large scale for quilt covers. In silk patchwork, for cushion covers or crib quilts, four inches is good length for the side of the square block, for quilt covers from six to eight inches square. In either case limit the number of colors to three, for to attempt to make complete stars of many colors would be to set about solving numberless Chinese puzzles. It can be done, of course, but it changes a perfectly simple design into an involved one, and the result is much less satisfactory however well the tints may harmonize.—[M. B. Peck.]

TATTED LACE

Make a row of wheels of a large ring of 2 d s, * p, 2 d s, * repeat six times, draw close. Around this are eight rings of 3 d s, * p, 2 d s, * four times, 3 d s, draw close, join thread to picot of first ring. Make another, joining to ring last made and to center. Continue until the wheel is finished. Make as many as needed and join together by rings like those in center of wheel. To make the dotted upper part of lace, make ring of 4 d s, join to p of wheel, 4 d s, draw close, leave 1/2 in of thread, make another ring, join to p on next ring of wheel, and so continue across the row. The next and all succeeding rows are the same, joining the rings to the thread



between rings. For the rings of the last row, make 4 d s, p, 4 d s, join to thread of preceding row, 4 d s, long p, 4 d s, draw close. The next ring is joined to first at long picot, and so on across the row. The sample is made of No 100 thread.—[Eliza C. Smith.]

Woven Rug The material should be flannel or any of the textures of cotton and wool now so much used. Save bright parts of old dresses and cut in bias strips 1/2 in wide and 1 to 12 in long. Take a darning needle and twine, run the needle through the center of a strip lengthwise, push up in a bunch of gathers on the needle, twist the ends in opposite directions, until the frayed edges stand out and resemble a large chenille cord, then draw the needle through to the other end of the twine. String or sew another strip, whirl it on the needle and push it to the end of the last rag strung, just as we used to string apples to dry. When the cord is full, tie on another, and so continue until there is three yards of rug-rope. Then start another. Do not push the strips tightly on the twine, just close enough to hide the stitches through the center. It requires about 90 yards of rug-rope for a woven rug 1 1/2 yards long by 1/2 yard wide. Take to a carpet weaver and have it woven "half-slayed," that is, half the number of warp threads used to the inch in weaving ordinary rag carpet. The ends of the rug may be of bright colors, with the center of one dark color. I made three rugs with hit-and-miss centers, using only dull colors, as black and all shades of gray and brown, mixing the shades as much as possible in the stringing of the strips, using bright colors for the borders. This rug-rope can also be sewed on canvas in any design one may fancy.—[Mrs May Gleason.]

Washing Fluid—One pound of potash, 1 oz salts of tartar, 1 oz muriate of ammonia, dissolved in 1 gal hot soft water. Dissolve the potash first, then the other ingredients. Put in a jug and cork tight as soon as made. Soak the clothes over night, then wring them out, and soap well. Add 1 cup of the fluid to 4 pails of water, boil the clothes 20 minutes, suds and rinse thoroughly. [D. E.]

A VARIETY.

Faded Coats—Take about 1/2 lb log-wood chips, put them in a small bag, place in an iron kettle and boil in soft water until strength is extracted. Add to the dye sufficient soft water to cover the goods, which must be well cleaned with soapsuds and left wet, when put in the dye. As things treated in this way do not crock it is not necessary to remove linings. Put the goods in the dye while hot and leave them in for an hour or more, airing often and keeping hot. Drain the goods by laying sticks across the kettle and rinse in two or more waters and dry on a fair day. The result will be satisfactory if the original color of goods is black. No setting is needed. If the first dip does not entirely restore the color, give it a second trial. I have tried it on many coats, vests and whole suits. One fine spring overcoat which had become bottle green was entirely restored and has been worn for years without fading. Of course this only applies to goods originally black. If possible, do the work out of doors. To press, let the garments dry, then wring an old piece of black cambric out of water, lay on goods and use hot irons.—[M. J. R.]

United States Storms, according to Prof Bigelow of the weather bureau, have nine average places of generation. The great majority form in Alberta, north of Montana, and after coming into the United States, travel eastward. A few come in over the North Pacific coast. A third group forms on the northern Rocky mountain plateau. A fourth forms in Colorado, being born on the very high mountainous elevations. A fifth forms in the Texas lowlands, and catching the gulf winds and moisture moves eastward. West Indian hurricanes form the sixth class. The South Atlantic coast storms make up the seventh class. Storms which come in from the Pacific on the southwest form the eighth, and finally a class of minor storms is generated in our central valleys. Some of these storms come

across the Pacific from the Asian coast, and after sweeping across the country, go out over the Atlantic to Europe, and even to Asia again, but there is no record of a storm having circumnavigated the globe. But no matter where these storms are generated, they always converge toward New England. New England, in fact, seems to be the stormiest spot in the United States. A record of 10 years ending with 1893 shows 1143 storms, all of which headed toward, and most of which reached, New England.—[Ainslee's Magazine.]

Oil the Skin—It contributes to soothe the tired nerves to have a thorough oiling after a bath. The oil which is used must not be sticky or capable of becoming rancid. It must be pleasing and inoffensive to the smell. Vaseline is a good thing to use. It must be used very sparingly, and thoroughly rubbed in, so that no trace of it is seen on the skin. Obtain only the purest kind, as some brands of vaseline are irritant to the sensitive skin. The oiling of the skin is of especial benefit to children when they have a cold. If the baby is cross and tired, give him a bath and a generous rub with vaseline, and watch him go to sleep while you are gently rubbing him.

Canned Beets (Requested)—Gather the beets in August, wash clean, cook till tender, cut in round pieces or long as you wish, pack tightly in glass cans that are air-tight, then cover with the following: One quart of vinegar (not too sour) to 1 lb sugar, 1 tablespoon mixed spices and a little salt. Boil all together, pour over the beets and seal while hot. These are splendid, and will keep until beets grow the next season. I have used this recipe myself and know it is fine.—[Mrs N. E. Snyder.]

Baked Corn—One pint of green corn cut from the cob, 1 cup milk, 1/2 cup bread crumbs, a little butter, pepper and salt, 1 cup hot water. Put in the oven and bake till brown.—[Ruth Raymond.]

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The Boy's Side—I would like to remind the people that say so much about young men and boys leaving the farm it is not always from choice. In my own case there was not profit enough for all of us, so I had to go.

The city was the only place I could get work in winter. I was not contented, could not enjoy myself as I did on the farm. I was sick half of the time. The water looked more like mud than like water; some different from our old Vermont spring water, clear and cold in the hottest days of summer. Another side of the question, a boy that works on a farm is expected to be a machine, get up early, work late, get small pay, then have work for only six or seven months in a year, question what can he do till spring unless he gets a chance to do chores or chop wood for his board? He spends all he has earned through the summer, often running in debt. I am willing to wear overalls to work, but come night I like to clean up and rest, read or study till bedtime. In most places when they go out to work the boys are used as slaves. No wonder we leave the farm for something else where we can have regular hours and be treated as if we were human beings. [One of the Boys.]

Death of a Councillor—My invalid son, Roscoe Young, who signed himself Shiftless Simpson, cannot write again to you; he has passed from earth to heaven. Although he had not walked for four years, he was as patient and unselfish as he could be. Mothers, it is the first death in my family and I am so lonesome. [Mary L. Young, R R No 3, Maryville, Mo.]

Thorns, Too—Coddle's Sister, are you really and truly an actress? Those papers that Farmer's Son mentioned must have something to fill their worthless columns, so I do not think we ought to heed them. Woman Hater, you "seem to have some sense if you are a man" in regard to books, but you have plenty of time to change your views in regard to matrimony. We cannot have roses without thorns. I'd rather have thorns too, than no roses. Women have no sense? Why, Mrs Poyser says in Adam Bede that "God almighty made the women to match the men." I am a plain farmer's wife (although I once had great dreams of fame) and have my little troubles (who has not?) still I am not going to bring them to you, but leave them with the All Wise Counsellor. [Busy Wife.]

Bright Side—We cannot know the future; then why worry over it? It may be even brighter than we think. Every cloud has a silvery lining. Our faces should be as a mirror reflecting only brightness. The gleaming of a pleasant smile, the warm pressure of the hand, the loving word spoken at the right time counts for so much. It does not pay to become cynical; even Doctor Kabark would prescribe brightness with his 1st gr of common sense, and should the disease overtake some, let us hope on remembering that there is a destiny that shapes our ends, rough how them as we will; we have no right to look backward for the past is irrevocable, the present ours, the future God's. [Grace.]

F & H is a nice helpful paper for the home circle. We enjoy its coming very much. But what is the trouble with some of the "council members"? Do we only hear about the "doleful times"? I would like very much to hear something about the bright side. Take care, Webfoot. If you have been acting the lover for some time past it is time that you were one if you are honorable. Perhaps if the "lovable" girl knew how you regarded her she might despise rather than love you. Do not launch your matrimonial craft

until you are reasonably sure of a clear sky, fair winds and a true pilot to guide you. I have a good voice and am studying in that line, but, if the right noble knight should come, why, I would have to do as God intended and become his wife. However I lose no sleep over it. I have a lovely home in the country and we drive, ride bicycles and do all kinds of work at home. [Blonde Buckeye.]

I enjoy reading Coddle's Sister's letters, they have good sense and I wish her success on the stage. I also like Katy Dids letters and believe as she does in speaking to everybody. A smile and a kind word will brighten sad hearts and make them forget their sorrows. Why do I find so many of the Councilors sad hearted? Come, dear friends, try and be happy. I, too, have my sorrows, but am going to cast them away. Woman Hater, all girls are not deceitful. Let us all try not say ugly things about anybody. Remember the least said is soonest mended. [Blonde.]

Bring Him To—So, Webfoot, you swam into the puddle and became fast in the mud? Undecieve the girl by all means, most likely she will thank you for it. A man can get any girl he wants if he knows how. Then never forget that all others are given up for one. Ladies, will you kindly listen to a word of advice, free of charge? Don't love any man until you know for sure he loves you. If you really love him, find you can't help it, don't let him know it. Then when a duck swims up beside you and says, "I don't love you, 'duckle dear,' but I'll marry you, because I think you want me to," be kind to him, for he needs to be pitied, but show him that you have not lost anything, then go swimming around with someone else in a week or two. If that doesn't bring him to, I don't know what will. [Mudhead.]

A Poor Boat—Member of Letter Circle 106, I will admit that some women are deceitful, for it is plainly noticeable but is deceit not used on the other side as well, and is not the reason of this because a man expects perfection in the woman of his choice? Thus all defects are put in the background for the time being. It is a poor boat that cannot weather a few storms and so on the sea of matrimony do not expect that there will always be smooth sailing. There will be some storms and some differences, but if each will try to enact the golden rule and not expect perfection "all will be well."

"There's many a thing that the maidens wish
As they travel the road of life,
While taking their part in this busy world,
And sharing its cares and strife,
Perhaps they may long for a cozy home,
With its furniture speck and span,
But to crown the whole, they care the most
For the love of an honest man."

It may be the wish of some of the opposite sex, for the love of an honest woman, so I say, "councilors of both persuasions, be honest with one another and so help avoid much of the unpleasantness of life and much that will bring heartaches to one another. [Sister Inez.]

Precious Jewel—Anent Webfoot's love affair, will you kindly permit a few words in behalf of the poor girl who is an interested party? I have lived the best part of my life in the country, and also some 10 years in the city, and I want to say to you, Webfoot, if the young lady is really in love, you are valuing too lightly the most precious jewel that will ever come within your reach. There is an earnestness and purity in the love of a country lass that you will search in vain to find among those of the city. While there may be exceptions, I am sure everyone of experience will bear me out in this assertion. Very likely you care more for the young lady than you realize. Suppose another fellow put in an appearance and there seemed danger of losing her, I believe your feelings then would be a surprise to you. Nothing is truer than that "like begets like," and if you found her earnestly and lovingly trying to make your

life a greater success, your heart must be very hard if you did not love her. But in any event, charity, patience and self-denial must be the rule of life to secure domestic peace and happiness. [Another Webfoot.]

Send Photos—Yes, Mr Cary is a model husband. I only wish there were more such men, then the women would not think of stinging, "needles and pins," etc. Now, F. O. J., it was somewhat careless in you to forget to tell what kind of handiwork The Maine and I exhibited in that little booth, in the Fourth of July Parade. Now, just as soon as we can get our kind Editor's agreement in the matter, let's all send in our photos under noms de plume, if not otherwise; and have them arranged in an artistic manner in the Council pages of F and H. I know all would enjoy seeing each other's countenances if only in print. [Mrs D. R. Clark.]

A City-Bred Girl—Webfoot, so it would be hard to get a "city-bred girl," would it? And you think it is because you live in the country. Shall I tell you what a city girl would do if you could get one to come? She would first take the conceit out of you. And as to the other girl you "have discovered is in love with you," are you sure your love for yourself does not influence you in any way? Probably if the truth were told she has discovered your most prominent characteristic and makes due allowances for you. Do not imagine you are the only man in the world, and girls are only too glad to accept your hand without your heart. Get rid of your besetting sin and you will see things in a clearer light. Hoping you will meet a "city-bred" girl and she will treat you as you deserve, I am—[A City Girl.]

Webfoot, I advise you in the first place to give yourself a good shaking. Then let your chaotic mind settle. If you still think you don't love the young



Just The Blues.
Many a woman dresses to go out, feels irresolute, sits down, and falls into a fit of despondent musing. Ask her what's the matter, and she'll probably answer "just the blues." And what are the blues? Only another name, in general, for a disordered liver and a diseased stomach. Cleanse the liver, heal the stomach, purify the blood, and there'll be no more blues. It can be done by the use of Dr. Pierce's Golden Medical Discovery. This medicine puts the diseased organs of digestion and nutrition into a condition of sound health. It eliminates from the blood all impure and poisonous substances, and cleanses the clogged liver. It contains neither alcohol nor narcotics.

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Farm and Home Council.

lady, go to her at once. Be as frank with her as you have been with us. Tell her you don't love her, and that if you should marry her it would only be out of mere pity; 10 to 1 she will not want to marry you. If she does, she is beyond our sympathy. You think it would ruin her life not to marry her. I think it would just be the reverse. And I believe the Councilors in general will agree with me.—[M.]

Ruined Lives—Bluff Springs, you are wrong when you say it is much easier for girls to do right than boys. We think all the Councilors will agree with us. But you are right when you say: "Speed the day of woman suffrage." If woman had the right to vote it would not be very long before most of the saloons would be abolished. Have any of the readers ever visited the Yellowstone park? We are deeply interested in it, as we contemplate going there some time, and any information on the subject would be received thankfully. Are any of the Councilors typewriters? If so, will they tell if it is hard work and hard to learn? Kent Circle 106, you had better go to Klondike a while and we dare say you will appreciate our presence when you come back. Webfoot, don't marry the girl, she will find out after you are married that you do not love her and two lives will be ruined instead of one. Buck Strap, you may "ask her" and it will be perfectly proper, but don't be so silly as to think she will show her love.—[Minnehaha and Cinderella.]

A Question—Buck Strap, give her a chance to tell what she thinks of you, anyway. Webfoot, a man who marries an attractive, common sense, loving and lovable woman ought, if he is worthy to be called a man, to be able to keep from loving another woman to such an extent as to endanger the happiness of his wife. If you have a strong character you might safely marry. I would like a little advice. I could go to college if I desired, but I am sure of a good farm of over 200 acres. Now would it be better to spend \$1000 learning a profession, or stay on the farm with a chance, in fact certainty, of not getting rich, but always sure of a good living? I am rather in favor of the latter, but like all high school graduates, I am getting lots of free advice. I think F & H Council is a great help to earnest seekers for good advice.—[Pat Irish.]

Council Crumbs—I am living in the country now and I look for F & H as much as I would for my meals. I enjoy reading the Councilors' Talk.—[Apple Blossom.]

I have been a reader of this paper almost a year and enjoy it very much. I live on a farm about 20 miles west of Omaha. Buck Strap, "Faint heart never won fair lady," you know. No true lady lavishes her love before she is asked to do so. Webfoot, you surely do not strike the fancy of city girls as much as they do yours. Member of Letter Circle 106, don't think all the girls are troublesome because one was. I admire your grit.—[Brown Eyes of Tree Planters' State.]

Faults are blessings in their way: Without who would see or know their own? By faults of others arousing my temper. I discover a weakness of my own. SENECA.

My brother is a subscriber to F & H, and we are proud to receive the punctual visitor in our home, the tempting sketches are hard to resist.—[June Eta.]

Wallflower, I desire to know you personally, and can deeply, fully sympathize with you. Certainly, Buck Strap, it is perfectly proper to ask your ideal to be your wife now. Webfoot, you are undeserving the love of that intense nature. You have misled and deceived the girl until you have won her heart. The probable results are that whether you marry her or not, you will be her cause of suffering and anguish for a lifetime. Ah! ye triflers of the human heart, retribution may overtake you.—[One Sufferer.]

Buck Strap, you have kept the girl's company long enough so far as time is concerned. The best way I know for you to find out if she loves you is to ask her. If she should not she will not make fun of you if she is the lady she should be. Webfoot, your case is certainly unpleasant, but do not make

it worse by marrying the lady without telling her just how you feel. As to the city-bred girls you might not like them as well as you may think after you know them better. "All is not gold that glitters."—[Potato Pete.]

We take your paper and like it very much. My grandchildren as soon as they come want to know if the paper is as good; they think the letters from the little people just light; they always say, "Don't forget to keep the paper." [Reader.]

As M. J. Huffman requested my address, it is Jack Silster, Valley View, Tex. I live on my father's farm of 400 acres. This is a beautiful and productive country and anyone who owns a farm and knows how to run it, can make a good living.—[Jack Silster.]

With regard to Webfoot I would say, be honest with your own conscience, use your own judgment and if you do not love the "attractive lady" tell her so honestly. If she really believes you are honest and that you do not love her and that you could not make her happy, it will cause her no deep pain. But above everything, be honest and frank with her. It is not so much the absence of love that causes pain, but the deceitfulness about it which gives the heart aches.—[Buckeye.]

I would like to know how many of you enjoy music. I am very much interested in it. Carlo Minetti, composer, teacher and singer of Pittsburg, Pa. is my favorite music writer, also Charles S. Burnham. I belong to three letter circles and all of them are very successful and doing a rushing business. [Rip Rap, Jr.]

Won't some mother tell me how to cultivate the art of story telling? I am not much of a talker (I'm a woman, too), and find it hard work to talk with my children. It's "don't do this" and "don't do that" and I often think if I could chatter with them the way some mothers do, I would not have to say "don't" quite so much.—[Silent.]

We take F & H; it is always a welcome visitor, is a very instructive little paper, but think it would be wise for some of the young ladies to go to their mothers for advice about their love affairs, as such things are too ridiculous for publication. Mira Creek, Neb, where I live is but a country postoffice. My father has been postmaster for the past 20 years. He being too old now to be bothered with such cares a great deal of the work has been turned over to me. I have not attained to the cranky old maid age yet, nor am I exactly on the marriage list, until I am sure I am exchanging my pleasant home for one fully as pleasant.—[Jessie M.]

It seems very probable that Woman Hater was not very popular with the girls and has given up all hope of getting a wife. Bad Boy, cancel your engagement and get a better girl.—[Amo.]

A Call to Arms—Daughters, do not marry a man who now and then drinks a little thinking that you may reform him, for nine times out of ten he does not reform, and instead of the loving words that were in store for you at the outset there will be curses and brutal attacks. Councilors, let stepmothers and divorce cases rest and strike with all your might against the evil of intemperance. If this evil is ever put down, then and not till then will this terrestrial sphere be a paradise. Prosperity will then reign supreme, which means less poverty and sorrow, fewer street walks, less crime, less divorce cases, and society will become an Eden of tranquillity, for in and through it will reign that all-swaying power, the greatest thing in the world, Love.—[The Sentimentalist.]

Guns vs Cats—W. J. S., I am glad you are not neighbor to me. We have a cat we think a great deal of, he very seldom goes to the neighbors, but the boy next door has a gun of some kind, using double B shot, and he fires at all the birds that come near. He can't kill them, but disables them. Now someone loves the cats you are so mean as to kill, and they have owners. God owns the birds and will defend them or punish one who destroys them. If you have neighbors, they must dislike you awfully.—[Splitfire.]

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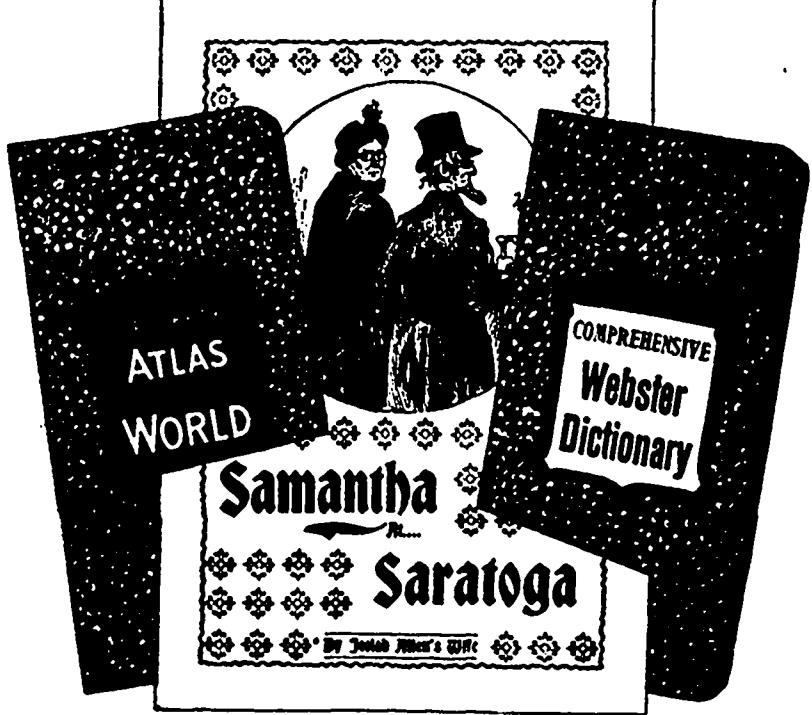
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8021 - LADIES' SACK, 32, 34, 36, 38 and 40-inch bust. Shell pink crepe de chine, yoke and trimming of cluny lace also silk, cashmere, nun's veiling albatross, lawn or dimity.



8022 - MISSIE'S FANCY WAIST WITH SAILOR COLLAR 12, 14 and 16 years. Large crepe de chine, trimmings of meshlin lace. The velvet and Albatross foulard, tulle or lansdowne may be used. Collar and sleeves of inserted tucking.



8013 - LADIES' TUCKED WAIST WITH YOKE. 8013 - LADIES' THREE-PIECE SKIRT. Waist, 32, 34, 36, 38, 40-inch bust. Skirt, 22, 24, 26, 28, 30, 32-inch waist. Dark red drap dote with heavy white lace over satin. Venetian, popeline, crepe de chine cloth and Henrietta are appropriate, with velvet, silk lace, panne or applique.



7854 - LADIES' PRINCESS WRAP. PER. 32, 34, 36, 38, 40, 42, 44 and 46-inch bust. This pretty house gown is of dark blue challie, with red polka dots, red velvet ribbon trimmings and tiny velvet buttons. Cashmere, Henrietta, French flannel or flannellette are appropriate, with trimmings of ribbon or braid.



8012 - INFANTS' CLOAK AND CAP. One size. Cream, Bedford cord, lined with white liberty satin. Cashmere, lansdowne, Henrietta or satin-faced cloth generally selected. For summer, pique, with embroidery or lace.



8015 - CHILD'S DRESS. 6 months, 1, 2 and 4 years. Pale blue lawn with Valenciennes lace and insertion. Nainsook, organdie, mus or gingham appropriate also silk cashmere, challie veiling or albatross, with lace, ribbon or silk trimmings.



8014 - MISSIE'S FANCY WAIST. 8014 - MISSIE'S THREE-PIECE SKIRT. Waist, 12, 14 and 16 years. This outfit colored poplin, turquoise, blue, shirt of popline in same shade, straps of black velvet ribbon. Lansdowne, foulard, crepe de chine or Henrietta is appropriate.



8011 - CHILD'S DRESS. 1, 2, 4 and 10 years. Blue and white china silk yoke of tucked white children and narrow Valenciennes. Cashmere, popeline, albatross foulard or cotton appropriate with silk velvet, lace or ribbon for trimming or lawn, organdie, dimity and fine gingham, some of all over embroidery, inserted or plain tucking.



8023 - LADIES' THREE-PIECE TUCKED SKIRT. 22, 24, 26, 28, 30-inch waist. Designed for clinging fabrics, foulard, crepe de chine, nun's veiling, may be developed in or candle, Swiss, lawn and fine muslin. As illustrated with liberty satin, with a tiny black polka dot.



8017 - BOYS' COAT. 2, 4, 6 and 10 years. For summer, fine linen or duck trimmed with embroidery, or stitched bands of the same material. Appropriate for ladies' cloth or broadcloth, covert, poplin and cheviot trimmed with lace, applique, braid or velvet. For winter a narrow band of fur may be applied.



8025 - MISSIE'S FANCY WAIST. 8025 - MISSIE'S THREE-PIECE SKIRT. Waist, 12, 14 and 16 years. Shell pink liberty satin, lined with ivory white mousseline and lace. Appropriate for foulard, crepe de chine, nun's veiling albatross or in dia silk, also organdie, Swiss or silk muslin.



8030 - LADIES' WAIST WITH EMPIRE JACKET. 8031 - LADIES' THREE-PIECE SKIRT. Waist, 32, 34, 36, 38, 40-inch bust. 32-inch waist. Gray and white foulard, white liberty satin, gingham, panne. Crepe de chine, liberty silk, lansdowne, albatross are appropriate.



7873 - Men's Outing Shirt. 34, 36, 38, 40, 42, 44 inch breast.



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THE WIFE'S INFLUENCE.

Feed the hired men well, give them good beds so they can rest, and pay them at the end of every month, or, if day hands, Saturday nights. I have always paid about the same for 31 years, \$25 and board for month men, \$1.50 for day hands. They board themselves unless they want to live with me. If so, I board and room them for \$3.50 per week. I have at the present time 49 men and 42 board with me. They get up at 4.45 and take care of their own teams. Some have the cows, others the pigs and some the poultry. Then they have a good hot breakfast at 6, go to work at 7, have dinner at 12 and supper at 6.

My motto is "work while you work, play while you play." Do by the men as you would like them to do by you; that is law and gospel combined. You will find good and faithful men in all nationalities. I have some from Ireland, Sweden, Germany, France, England and from P. E. I. and Nova Scotia, with a few Americans. If you get one that you don't like, tell him he isn't needed any longer; don't scold or swear; it does harm rather than good. On a small farm a woman has about as much to do with keeping good help as the man. If she likes the hired man and his work he will in nine cases out of ten get along well.—[J. E. F., New Hampshire.

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A comfortable house for the tenant is always attractive, and need never be empty. Liberal wages, a garden spot free, also firewood, and other accommodations, costing little in dollars and cents, but greatly appreciated by him who owns no home, will go a long way to insure a good steady man with family, who will understand that to work to your interest will be to his interest, and will gladly prolong his stay with you.—[A Woman Farmer, Indiana.

A young man got into bad company. He had respectable friends, they asked me to try him. He came, but knew little about farming, he had no education so was a dupe for all knaves. I told him kindly but firmly about the evil of his ways and that it must be stopped. I encouraged him in everything and had no more trouble. He came to be one of the best men in that section. I also made him save his wages. He worked for me about seven years and then went partners in a farm with his brother. Give the hired man a spare day when you are not busy and in a hurry time you can always depend on him. I hired another man. I had him for about five years. Two better men you could not find.—[John Moorehouse.

I have lived on a farm 30 years; in this section negro labor is entirely employed. We never have any trouble with them; rule them kindly but firmly, allow them but few privileges, pay them every week. The ignorant negro laborer is proverbially improvident, following literally the Scriptural injunction to "take no thought for the morrow." When paid Saturday, by Monday morning he hasn't a cent and is ready to go to work again. I have a neighbor, who for many years paid his laborers twice a year. When pay day came they would with few exceptions lie off for a week or two. Within the past year he has adopted my plan and finds it works successfully.—[M. P. Knight, Tennessee.

Never let them go beyond their wages, but allow them to take up a certain amount each month. They are better satisfied when you owe them than they are when in debt to you. Always deal strictly honest with them, so that they will have perfect confidence

in you. Be positive with them and make them respect you. I am now working three men (all colored). One has been with me seven years and another five, and the other three. The last one says he never wants to live anywhere else. I prefer the colored farm laborers to the white.—[V. W. H., Georgia.

If there are any shows or other big days, let them go, and do not dock them on wages. The trouble with some people is that the wife as well as the husband wants to go. One man told me he did not hire out to the wife to work.—[Reader, North Dakota.

They commence milking at 6 a. m. Work and chores are done by 6 p. m. Supper is ready promptly. If they want to go to town, three miles, I let them drive a good team. I pay them every Saturday. All good friends.—[S. W. Nott, Colorado.

I have a man now who has been with me about nine years, and is still with me. A laboring man is as good by nature as anyone else, but too often he is looked upon as inferior to the employer and is therefore treated as such by many, and hence his stay will be short and unsatisfactory.—[H. C. Whaley, Marion Co., Mo.

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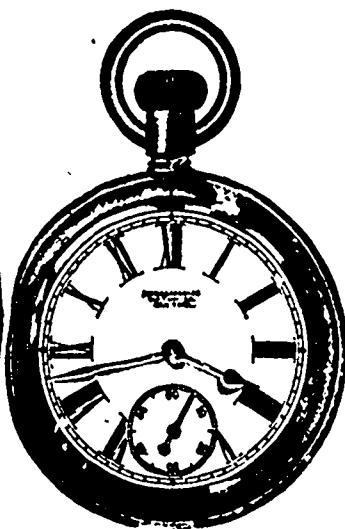
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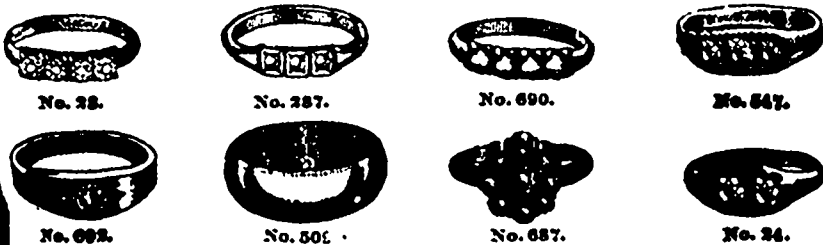
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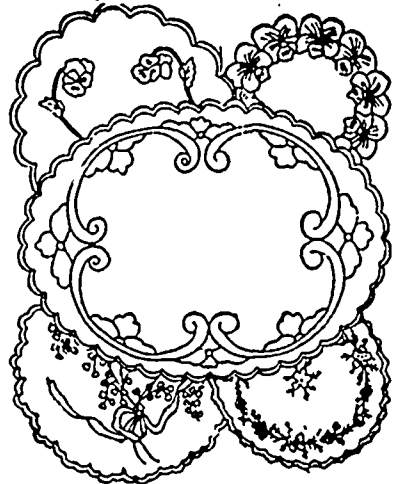


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- 1 Floral and Ribbon Design, 8x8 in.;
- 1 Design Forget-me-nots, with Ribbon for Monograms, etc., 6x4 inches;
- 1 Floral Corner Design for Scarf, 6 1/2 x 9 inches;
- 1 Spray of Roses and Buds, very dainty, 5x9 in.;
- 1 Conventional Corner for Screen or Portiere, 11x11 inches;
- 1 Design for Vell Case, 5 1/2 x 7 1/2 inches;
- 1 Design of a Fleur-de-lis for Drapery Border, 3 1/2 x 2 1/2 inches;
- 1 Floral and Horseshoe Design for Hunting Bag, 4 1/2 x 4 1/2 inches;
- 1 Spray of Pinks;
- 1 Spray of Forget-me-nots;
- 1 Spray of Lilies, 5x6 in.;
- 6 Dollies for Jewel and Delft Work, 6x6 in.;
- 1 Corner Design of Buds and Leaves for Buffet Scarf, 8x8 inches;
- 1 Design for Vell Case, 5 1/2 x 7 1/2 inches;
- 1 Design for Jewel Work, 4 1/2 inches high;
- 1 Artistic Grecian Border, 2 inches high;
- 1 Design of Clover for Scatter Work;
- 1 Border Design for Baby's Flannel, 3 1/2 in. wide;
- 1 Border Design, 2 in. wide;
- 1 Border for Tablecloth, 4 inches wide;
- 1 Corner Design for Lunch Cloth or Cushion, 8x11 inches;
- 1 Floral Wreath;
- 1 Very Pretty Design for Corner, 8x8 inches;
- 1 Design for Border, with Corner, 5x16 inches;
- 1 Floral Corner Geranium, 6 1/2 x 6 1/4 inches;
- 1 Design Water Lily for Dolly;
- 1 Corner Design for Jewel Work, 8x8 inches;
- 4 Designs for Fruit Dollies, all different, 3 1/2 x 3 1/2 in.;
- 1 Design of Bird for Lamp Screen, 4 1/4 inches;
- 1 Corner Design of Berries and Leaves with Spider Web, very pretty, for Lambrequin Corner, 12 x 18 inches;
- 1 Floral and Horseshoe Design with Motto, for Glove or Vell Case, 6x6 inches;
- 1 Conventional Border Design for Jewel Work, 4 1/2 inches high;
- 1 Artistic Grecian Border, 2 inches high;
- 1 Design of Clover for Scatter Work;
- 1 Border Design for Baby's Flannel, 3 1/2 in. wide;
- 1 Border Design, 2 in. wide;
- 1 Border for Tablecloth, 4 inches wide;
- 1 Corner Design for Lunch Cloth or Cushion, 8x11 inches;
- 1 Floral Wreath;
- 1 Design of Orchid and Leaves for Scarf Corner, 6 1/2 x 10 inches;
- 1 Clover Design for Dolly;
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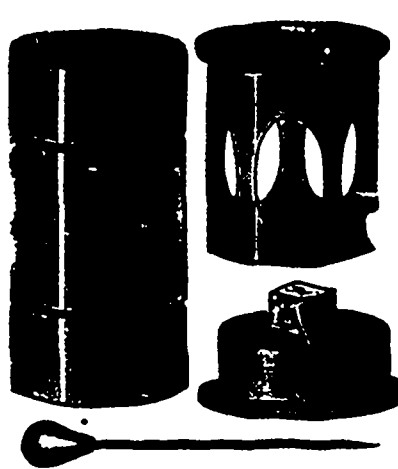


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This microscope is specially imported from France. As regards power and convenient handling, good judges pronounce it the best ever introduced for popular use. The cylindrical case is manufactured from highly polished brass, while there are two separate lenses—one at each end of the microscope. The larger lens is adapted for examining insects of various kinds, the surface of the skin, the hair, fur or any small articles. The other lens is exceedingly powerful, and will clearly delineate every small object entirely invisible to the naked eye. Thousands of living animalcules can be seen in a single drop of stagnant water. Everybody should own a microscope, and to this end we have placed this within reach of all. We will send this microscope free as a premium to anyone sending us One new subscriber at the club rate of 35 cents a year. Price 25 cents, or with Farm and Home one year, 50 cents. Postage paid by us.

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Around the Globe.

THE CHINESE PUZZLE.

The long anticipated advance upon Peking began about Aug 1, with 2000 American troops in the allied army of 14,000 men. In spite of the declaration of Li Hung Chang that if the troops advanced the Chinese must fight, this was deemed the only course to pursue. A message from Minister Conger, the second to come direct from him to Washington, announced that the legationers safe and well but provisions and ammunition low and the imperial government urging them to leave Peking, which they knew would mean certain death. That the government was in league with the boxers from the first appeared from the letter of the London Times's correspondent in Peking, Dr Morrison. This letter said the attacks on the legations ceased after the victory of the allies at Tientsin, and the government turned squarely about through fear and implored Queen Victoria and President McKinley for aid against the boxer uprising. The first victory of the allied army on its way toward Peking was at Pei-tsang, Aug 5. The Americans who participated were the 9th and 14th regiments, Reilly's battery and the marines, in all about 2000. The British, American and Japanese forces worked together against one flank of the enemy and the Russians and French against the other. The signs pointed to a stubborn resistance all the way to Peking, with the probability that the prisoners in the British legation would be dead long before the march was over.

Personal—The new ambassador to Italy, who succeeds Gen William F. Draper, resigned, is Roger Wolcott, formerly governor of Massachusetts, and a man of culture, wealth and winning personal qualities.

John Clark Ridpath, author of several histories and biographies and for a time the editor of the Arena magazine at Boston, died in New York aged 60. His home was in Greencastle, Ind; and he was a native of that state. He was prominent many years as an educator in Indiana, being at the head of several large institutions of learning.

Queen Victoria's second son, the late duke of Saxe-Coburg and Gotha, was very popular as a sailor prince in the navy, but he lost favor with the English people when, succeeding to his German duchy through his German father, he sought to have his pension of \$125,000 a year from the British treasury continued. The amount was reduced to \$50,000 a year. The duke, whose name had been Prince Alfred Alexander William Ernest Albert, was born Aug 6, 1844, and in 1874 married Princess Marie, the only daughter of Alexander II of Russia. Among his experiences while in the navy were a visit to the United States and a bullet wound from an assassin in Australia. His successor to the duchy of Saxe-Coburg and Gotha is his son, the duke of Albany, who will not be of age till 1905, therefore his son-in-law will be the regent until that time.

North Carolina follows South Carolina, Mississippi and Louisiana in adopting a constitutional amendment which means the disfranchising of most of the negroes. At the recent state election an amendment was ratified providing that the qualifications for voting in North Carolina on and after July 1, 1902, shall be a residence of two years in the state, six months in the county, four months in the ward or precinct; the payment of poll tax; the ability to "read and write any section of the constitution in the English language." The most notable feature of the amendment, however, is the clause which saves ignorant whites from disfranchisement by providing that no male who was entitled to vote previous to Jan 1, 1867, and no lineal male descendant of such a voter shall be denied the franchise, provided he registers on or before Nov 1, 1908. After that date illiterate whites, if any remain, will be on a level with the blacks.

Brockway Out—The reformatory at Elmira, N Y, loses the warden whose methods have made him an object of national interest, the new trustees appointed by Gov Roosevelt having forced him to resign. Z R Brockway, the retiring warden, is now an old man,

having been at the head of this institution many years. It is his theory that after the commission of certain crimes the criminal should not be set at liberty until he has given indications that he will try and live within the law. Under his plan the younger criminals, especially those whose crimes were committed thoughtlessly or under unusual temptation, have an opportunity to learn self-restraint, and a prospect of going out after a moderate term fit to be decent citizens. Deliberate or hardened criminals undergo a severe training, physical and moral, which is thoroughly distasteful and has provoked much opposition, especially from the criminal class. The Brockway system has had the indorsement of those who make prison methods a study.

Two Kings—The new king of Italy, Victor Emmanuel III, the only son of Humbert, differs from his father in being small, delicate and a scholar. The young man's character and ability are praised in the highest terms by those who know him. The kindness of King Humbert was proverbial. His fierce martial aspect and his passion for things military covered a most amiable nature. King Emmanuel is said to be as unapproachable as his father was approachable, being sensitive on account of his physical inferiority. He is a general in the army, and is assiduous in his devotion to military duties. He was born Nov 11, 1869, and in 1896 married the Princess Helene, a daughter of Prince Nicolas of Montenegro. The new queen is said to have been pronounced the most beautiful woman at Queen Victoria's jubilee. The late King Humbert succeeded to the throne in 1878 on the death of his father, Victor Emanuel. His reign was distinguished chiefly by the entrance of his kingdom into the triple alliance with Germany and Austria. He was born March 14, 1814, and fought in the war for the unity of Italy. He married a cousin, Margherita, daughter of the duke of Genoa.

The Islands—The prosecution of E. G. Rathbone follows that of Neely, for postal frauds in Cuba. Rathbone was formerly director-general of posts in the island, and in spite of two increases in salary he swindled the government. The Neely defalcation is estimated now at \$130,000 to \$150,000. Rathbone drew \$5 a day fraudulently, stole a thousand dollars or more, and charged many of his personal expenses to the government.

Cuba is to have home rule soon, in accordance with our national pledge. A constitutional convention for which delegates are to be chosen on Sept 15, will be held in the fall. The recent orderly and intelligent voting at the municipal elections convinced the government of the readiness of the island for autonomy.

The civil service rules operative in the states and territories have been applied to Hawaii and Porto Rico.

The Government is buying real estate, in the shape of two little islands of the Philippine group left out by mistake from the original bargain with Spain. They are very small, cost \$50,000 apiece, and are named Cibitu and Cagayan.

The Semi-Centennial of California's admission into the Union next month will be one of the finest pageants ever seen in the state. A parade of various orders of Native Sons, which will take place on Sept 10, will be the main event of the four days' celebration. The feature of this parade will be the number of floats representing scenes in early California history. Among those who will be in line will be several survivors of the original "Bear Flag" party.

The national law requiring all freight cars to be equipped with automatic couplings, in order to check the slaughter of brakemen, went into effect the other day. The grand total will not be far from 1,500,000 cars. It is thought at least 1,000,000 cars have been equipped with the automatic couplers, and before the end of the year every railroad will have all its cars fitted up with these couplers. The work has extended over a number of years.

Invalid (to sympathizing caller): "My dear, I have lost nearly all my hair." Child: "I know where it is, mamma; I saw it in your dressing table drawer."

The Honey Product.

MARKETING SMALL LOTS.

We like cash to come in, but we have a rooted objection to its going out. And this is why the small producer is always loth to buy expensive shipping boxes, crates, glass jars, etc. With the apurist with hundreds of hives, it is rather different; honey is his business, he has things all systematized and figured out beforehand, and as he buys in large quantities, he gets his goods at cut prices by freight, and if he wishes to, he can generally buy on credit. Altogether, his trade is so sure and the returns so clearly in sight, that he thinks no more of laying out what money he considers necessary than a tradesman does of ordering his spring stock.

The farmer, with whom bees are a side line, and nothing more, does not view the matter quite the same light. He has had to pay for his hives and sections, and probably for a certain amount of foundation, and he does not feel like spending any more. Some tell him this disinclination to go on spending is all wrongheadedness and foolishness, that the cents laid out in proper shipping cases, labels, etc, are going to come back tenfold in increased prices.

I fully believe that the man who is going to succeed is the man who remembers that a penny saved is a penny gained and acts accordingly. At the same time I would suggest that there is a middle course between getting the most expensive shipping boxes, etc, and taking one's crop, all ungraded, clover and buckwheat, scraped sections and unscrapped, full sections and half full, all together, to the nearest store and perhaps having to take out one's price in some sort of miscellaneous articles.—[Gilbert Wintle, Vandreuil Co, Que.

"What are you crying for, my little man?" "Because you're sitting on my tart!"

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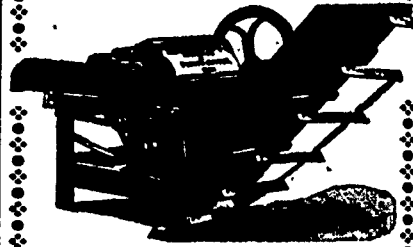
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