



Go see something new this summer

## Xcursions

via the Santa Fe to the scenic regions of the Far West.

California—Colorado—New Mexico—Arizona—Rockies, Grand Canyon National Park, Yosemite and the Big Trees and other National Parks.

Mail this coupon to me  
G. G. Robertson, T. P. A.  
P. O. Box 100, Santa Fe, N.M.  
400 Transamerica Building  
Denver, Colo.  
or the Local Agent

Would like information regarding excursion to \_\_\_\_\_  
There will be \_\_\_\_\_ persons in the party.  
Also mail descriptive travel folder.  
Name \_\_\_\_\_  
City and State \_\_\_\_\_

### Stomach-Worm Prevention.

Here is the up-to-the-minute dope on the prevention of stomach worms in sheep.

Sopper sulphate crystals, four ounces, avoidpouls. Dissolve completely in a pint of a quart of hot water and make up with cold water to three gallons, using granite-ware or earthenware vessels. This makes a 4 per cent. solution and is enough for 100 doses.

The apparatus is extremely simple—a four-ounce glass measuring graduated, or a bottle on which the ounces are marked—a granite-ware quart measure, a gallon measure of the same material and a drizzling tube.

The drizzling tube is made of a granite-ware or rubber funnel, a three-and-a-half-foot rubber tube, three-eighths of an inch inside measure, and a six-inch brass tube, all fitted together.

The dose: For sheep weighing over eighty pounds, four fluid ounces; for lambs weighing seventy pounds, three and a half fluid ounces; for lambs weighing sixty pounds, three fluid ounces.

It is not necessary to starve the sheep before dosing them. Bring them into the barn and go to work.

Two men are needed, one to handle the sheep, the other to handle the dosing. The man with the sheep straddles it, backs it into a corner and holds its head horizontally with one hand and with the other hand he inserts the brass tube about four inches into the sheep's mouth, wiggling it around the while. The other man measures out the dose into the glass and slowly pours it into the funnel.

The two of them can handle as many as fifty sheep in an hour without casualties. But don't be in a hurry and don't fail to keep the sheep's head in a horizontal position or the solution will go into its lungs.

Lambs are not dosed until they are weaned and ewes are not dosed within two weeks of lambing.

To make protection all the more certain, raise your lambs on a succession of forage crops: rye, wheat, oats, barley, rape, soy beans, corn—and you will have no losses from stomach worms.

### Kills Canada Thistles.

Another method of destroying Canada thistles has been found successful. It consists of plowing the thistle patch while the soil is very wet, and then working the plowed ground with a heavy roller. The soil is rolled and rolled until it is packed hard. This puddling of the wet soil causes it to become exceedingly firm, becoming all the more firm as it dries.

A solid clod as thick as the furrow slice is a difficult proposition for a Canada thistle to shoot to penetrate, and very few are able to accomplish this feat. Following rains which may tend to soften the compacted soil, the rolling operation should be repeated and always while the ground is wet. This method not only smothers the underground portions of the thistles by interfering with the proper exchange of gases, but actually prevents the emergence of shoots.

A field in a pasture or hay crop offers the best opportunity for this kind of warfare against these thistles.

To clean piano keys, moisten a cloth with alcohol, rub them well and wipe with a dry cloth.

## THE FARM GARDEN

Its Various Problems and Its Many Possibilities.

BY W.M. KELLY.

Comparatively few farmers appreciate the value of the farm garden as a factor in promoting the health of their families, and furnishing an abundant supply of palatable and nourishing food at all times during the growing season. In the first place, there is a lot of satisfaction in having fresh vegetables from one's own garden; and, in the second place, a good garden makes a direct appeal to the family finances. And, by no means the least of gardening pleasures is the feeling that you have proved an efficient gardener by getting your neighbors one better, and getting peas, early potatoes, or sweet corn, a few days earlier than they do.

Some farmers complain that they have no good garden land. That is a poor excuse for neglecting to grow some of the vegetables one can easily raise at home. One must balance the arguments for and against any particular spot for the garden, and pick out the best available. It is a mistake to select a site too far from the house, for the garden may easily be made an attractive feature of the farmstead, and the chances are ten to one that it will be neglected if the distance is too far from the buildings and water supply. Sandy soil, with an abundance of organic matter in it, is the best for early garden crops. But if one has no sandy soil, he need not abandon hope of having an early garden. The standard early vegetable crops will grow in any soil that is reasonably fertile and well prepared. On heavy clay soils there is greater necessity for plowing under organic matter and thoroughly pulverizing the lumps and clods.

### ABUNDANT MOISTURE.

Of first importance to the proper development of most vegetable plants is an abundant supply of moisture from start to finish. If this is limited, no amount of plant food, care and attention will bring complete success. In a sense, water is the limiting factor in plant growth development, for their food must be taken in liquid form. In other words, the capacity of a soil to produce fine crops of vegetables depends upon its powers of retaining moisture until such a time as it is needed by the growing crops. The chemical changes with which plant foods form compounds of nitrogen, potash and phosphoric acid are hastened by properly preparing the soil to hold an adequate supply of moisture during the periods of dry weather. Thoroughly pulverizing the lumps and clods not only creates favorable conditions for the tiny roots of plants, but provides greater storage capacity for moisture and hastens the availability of plant food. Getting the surface smooth by shallow-harrowing and leveling, prepares a fine seed-bed and leaves a soil much to check the escape of moisture.

Rich, well-composed farm manure is the best fertilizer for the garden. Ma-

nure not only contains readily available plant food, but it furnishes the soil with organic matter; thus keeping it open and porous, and in condition to absorb great quantities of moisture and retain it until needed. It will give the best results spread on top of the soil, disked in and plowed under. That leaves the bottom of the furrow free from clods when the crop is planted. If the supply of manure is limited, or in case one desires to hasten the growth and maturity of certain crops, it may be done by using special high-grade fertilizers, or making a mixture of twenty-five pounds of nitrate of soda, fifty pounds of sulphate of potash, seventy-five pounds of acid phosphate, 100 pounds of tankage, spreading it broadcast on the plowed ground and harrowing it while preparing the ground for planting. There is little danger of getting the soil too rich to produce crops of fine vegetables. A well fertilized, properly prepared soil is the foundation of a successful farm garden.

### BUY GOOD SEED.

There is nothing more disappointing to the gardener than to have his labor of preparing a good seed-bed go to naught because of poor seed of low germinating powers, or varieties not true to name. By all means buy garden seeds of responsible seedmen and get the best tested seed you can find. It is always safer to order seed early. By delaying the matter the chances are one may not get the desired varieties, and the seed may be old and light. Another important problem is the selection of suitable varieties. As a general rule, it will pay to stick to the good old favorites which have been tried out and given satisfaction in your locality. If you wish to try out a few new varieties, buy the seeds by the packet and try them out in a small way. In most cases, the so-called superior varieties are merely an improvement over sorts that have been grown for years. It is well to send for several seed catalogues and make a careful study of the different varieties and find out all you can about each crop or variety you attempt to grow.

As a rule, the farmer will find it more profitable to buy celery, tomato, pepper and cauliflower plants than to attempt to grow them at home. It is better to go to some good market gardener and buy what one needs. Always bear in mind that bigness is not a safe rule to follow in estimating the value of vegetable plants. Plants that are stocky and well hardened off, that is, which have been out of doors, day and night, for a week or ten days, will start growing quickly and prove more vigorous than the more tender ones removed from the rows in the greenhouse and planted immediately in the garden. The vigorous plant that has become toughened to outdoor life has a tough, stocky, purplish appearance.

## SLIP COVERS DRESS UP YOUR OLD FURNITURE

BY A. LOUISE FELLEBROWN.

Slip covers, hide a pile of ugliness. And there is plenty more for them to cover up if we would but give them half a chance.

We can't afford to discard every old piece of upholstered furniture whose faded color or gaudy pattern fails to fit into our room picture. Anyhow, the old sturdy pieces are sometimes most comfortable. Their familiar hollows fit exactly the curves of a tired back. And Father might have a word to say if you decide to send his old armchair to the attic. But he won't mind if it wears a new slip cover. Secretly he'll admire it.

A slip cover is just what the name implies—a separate covering of some light material made to fit the chair. It fits like an envelope and is fastened under the chair seat or at the back with snappers, or tied together with tapes. If made and fitted carefully the covers are as trim looking as upholstery and even so much more practical. When they are soiled you can slip them off for a tubbing or have them dry-cleaned, according to your material. When they are worn out you can replace them for half the money it would cost to upholster the chair.

Slip covers became popular a few years ago when the decorators discovered the value of figured linens, chintzes and cretonnes for living-rooms as well as bedrooms. After they had used these materials in curtains they began to use them to upholster furniture. This was extravagant, as the light colors soiled too easily. Then someone thought of the slip cover. Instead of using them only as a covering for delicate furniture to shield it from the summer dust, slip covers became part of the decorative scheme. They were made out of charming, brightly-colored materials and later out of cotton damask, heavy monk's cloth, glazed chintz and even velvets or corduroy where the room demanded more luxurious textures.

Slip covers may match the window hanging in material or they may be a plain fabric that harmonizes in color. If plain it is wise to bind the seams with another shade to give a bit of

decoration to the chair coverings. Linen-cloth covers bound with cretonne are pretty. And cretonne bound with velvet is unusual and yet serviceable. Monk's cloth is perhaps the most practical material. It stays clean a long time and its rough linen surface wears well. It comes in a variety of colors besides the natural linen, in which we knew it first.

### Flowers to Give Away.

That's what you can do freely, without a qualm, if you plant a row or two of annuals in your garden, alongside the vegetables so they may be cultivated with ease at the same time. Last year we planted scarlet sage, bachelor buttons, asters, zinnias, marigolds and cosmos in our garden, cultivated them when we worked the vegetables and had a beautiful display until frost. We sowed the seed in the row and had plants to transplant and to give away in abundance. The blossoms cheered us up when we went into the garden for any purpose. They supplied bouquets in plenty for the house and the blossoms that were cut when frost threatened supplied cut flowers for the local church and school for two or three weeks after the plants were killed by the cold. Enough seed was gathered to plant again next season and to supply some beds at the schoolhouse.—L. H. L.

When the family breaks down, there is not a substitute to mend the break. The country, being the ideal place for building and maintaining the true Canadian family, is, for this reason, of first importance to our cities.

Insects will be discouraged where farmers practice clean cultural methods with good crop rotations and keep the fence rows, ditch banks, and waste places properly cleaned out.

## S.S. LESSON

May 2. God's Covenant With Noah, Gen. 5: 28 to 9: 28. Golden Text—*I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth.*—Gen. 9: 12.

### ANALYSIS.

I. NOAH'S FAMILY HISTORY, 5: 28-32.  
II. THE SIN OF THE ANGELS, 6: 1-4; AND OF MAN, 6: 5-12.  
III. STORY OF THE FLOOD, 6: 13 to 9: 14.  
IV. THE ALTAR AND THE PROMISE, 8: 15-22.

V. THE BLESSING AND THE COVENANT, 9: 1-17.  
VI. NOAH AS VINEYARDER, AND HIS THREE SONS, 9: 18-29.

INTRODUCTION—Noah is the tenth and last of the patriarchs before the flood, chap. 5. Like them he is represented as having lived to a very great age (9: 29), and like Enoch (5: 22), he is described as a good and pious man, "a righteous man and perfect in his generations," a man who "walked with God." So, in the midst of a wicked world, he found grace in the eyes of the Lord, and was saved with his family from perishing in the great flood. Compare what is said of Noah in Hebrews 11: 7.

There has been found an interesting parallel to the story of the flood, contained in these sections, in a series of closely written tablets of baked clay found in 1872 in the ruins of an Assyrian palace on the banks of the Tigris river. They formed part of the library of an Assyrian king of the seventh century, B.C. The story which they contain comes from an old Babylonian source and tells of a council of the gods which resolved to send a flood upon the earth. A certain man, who was a favorite of one of the gods, received warning, built a great ship, and saved himself, his family, and his dependents, with domestic and wild animals, from drowning in the rising waters. Many of the details of this story are closely like the story in Genesis, but they differ very greatly in their conception of the character and purpose of God. The idea of God in Genesis is pure and high, untainted by evil passions, in strong contrast to the "quarreling, deceitful, vindictive pack of Babylonian deities."

Both narratives, in all probability, preserve the memory of some great catastrophe of the lower Mesopotamia country, one of the earliest homes of the human race. That region is still covered with water in the spring and early summer by the floods of the Tigris and Euphrates rivers, fed by the melting snows of the Armenian mountains. There must have been a much greater inundation than usual, perhaps accompanied by a widespread seismic disturbance, which, to the simple folk of that early age, would have seemed to cover the whole earth. There is no sufficient reason for declaring, as some modern writers do, that the Flood Story is unhistorical, but there is no evidence that the flood of waters covered the whole world as we know it to-day. The extent of the earth was unknown to that age, and when those who first told the story said, "the whole earth," they must surely have meant the earth, or the land, which they knew.

### IV-V. THE BLESSING AND THE COVENANT, 9: 15 to 9: 17.

There is reason to believe that this entire narrative of the flood and what followed is drawn from two older sources. The material has been carefully and intricately woven together so as to form a continuous narrative, but it is quite possible in many places to distinguish the two strands. For example 8: 20-22, in which the divine name is "the Lord," a translation of the Hebrew *Yahweh*, comes from one of these older sources, and 9: 1-17, in which the divine name is "God," from the Hebrew *Elohim*, is from the other.

Two very ancient laws appear in 9: 4-6, a prohibition of the eating of blood, and of the taking of human life without cause. The life of man is held sacred, because he is made in the image of God.

9: 8. The word "covenant" has a very important place in the religious teaching of the Old Testament. Its primary meaning is "bond." It represents an agreement between two parties, freely entered into, but then involving an obligation of the most binding character. Under this figure is represented again and again the relationship into which God enters with chosen men and with a chosen people, with Noah, and Abraham, and Israel under Moses' leadership, and David the king. God is revealed making his promises to men, and men in their turn undertake obedience to the laws of God. The same obligations rest upon both to observe and keep the terms of the covenant bond. As God is true to his promise so must men be true. As he is faithful so must they be faithful. The same standard of righteousness which they attribute to him must be theirs.

9: 13. "My bow in the cloud." After the storm of rain the rainbow appears. If the destructive rain was a symbol of God's anger, the rainbow which followed became a sign of his mercy and his forgiving grace. Of course the rainbow is a natural phenomenon, produced by the refraction, as in a prism, of the rays of light, and it is not said here to have been now created for the first time. But it now becomes a sign of the covenant promise, a symbol of the mercy and restored favor of God.

### A Time-Saving Feed Rack.

A feed rack that is a real time-saver to the owner is twenty-four feet long, and eight feet wide and most of the construction details are of the usual type. But the rack sets with one end against the barn and in direct line with a wide door through the barn wall. When it is necessary to draw from feed stored in the barn mow it is filled by dropping hay down through a hole in the mow floor directly in front of the door, then pitching the hay into the rack.

## A Boon To Ford Owners

"THE ECOMETER"—A Genuine Edison Invention for Ford Cars. Guaranteed by Theo. A. Edison to increase your mileage 20 to 50%. To make your motor run smoother and cooler, cut up carbon, increase acceleration and give your engine real pep and power. Operates Positively and Automatically. Installed by anyone in 15 minutes. Packed in box with full instructions, by mail, \$2.00, Postpaid. Sold only on a Positive Money Back Guarantee. A post card from you on a 10-day trial will send your money back immediately and you keep the Ecometer. H. GADSBY, 546 CLINTON ST., TORONTO 8. Sole Canadian Representative. References—The Imperial Bank of Canada.

## The Automobile

### AUTO BEARINGS SHOULD RECEIVE CONSIDERATION.

There are no more important factors in an automobile than the bearings. A bearing is a support for a moving part, made so as to minimize friction, stand wear and achieve a fine adjustment.

Numerous types of bearings are found in motor cars. In some the metals are selected with the idea of obtaining great strength rather than non-friction qualities; others have strong metal shells lined with a comparatively soft non-friction metal. Then there are so-called anti-friction bearings, in which balls, or straight, taper or helical rollers are used, giving a rolling rather than a sliding contact.

### 100 ENGINE BEARINGS.

There are more than 100 bearings in the engine. The cylinder and piston, not generally termed bearings, are usually of cast iron, which gives comparatively long wear and in which the friction is not great if lubrication is good. When wear does occur at this point it is necessary to rebore the cylinders and have larger pistons fitted. The wrist-pin bearings usually are in the form of a bronze shell, called a bushing, surrounding the wrist pin. When wear occurs it is necessary to drive out the bushing and replace with a new one which fits.

In the crank-pin bearings, which usually are bronze lined with babbit, when wear occurs, the adjustment is made by taking out thin sheets of metal called shims. The main crank-shaft bearings are of the same type. The cam-shaft bearings usually are of ball type, which must be replaced with new ones when they become worn. The cam-follower bearings may be just flat plates resting directly upon the cam, or rollers running on a pin in the valve push rod. Wear in these parts usually would be compensated for by adjusting screws on the valve push rods. The push-rod guides require replacement when worn.

### OIL-PUMP BEARINGS.

The oil-pump bearings consist of a plunger working in a small cylinder, with one end bearing against a cam, or a pair of gears driven from the cam shaft. Perfectly lubricated, these bearings seldom require adjustment.

### Hopper Method of Feeding Baby Chicks.

Many people do very well in rearing chicks by using the hopper method. The hopper method, as compared to the six moist meals per day method, entails much less labor and with some people give as good results. We have not been able to raise as high a percentage of chicks on the hopper or dry method, but then they do grow fairly well.

Ration: Ground yellow corn (sweet and clean—not mouldy, heated or musty), 50 lbs., middlings, 15 lbs., bran 5 lbs., fine oyster shell 5 lbs., fine dry salt 1 lb., beef scrap 18 lbs.

Thoroughly mix—if not well mixed the salt may do more harm than good. To each 100 lbs. of the above mixture should be added 1 pint of cod liver oil. It is well not to mix the oil in the feed too far in advance of feeding. It would be best not to mix the oil in more than a week's supply. If the chicks have plenty of direct sunlight and tender green feed the oil may be omitted.

We would advise the use of cut alfalfa hay—of good quality—as litter in the brooder, and renew it about every week or ten days.

Feed the mash in boxes or troughs kept constantly before the chicks. Have plenty of boxes so each chick gets a chance.

One should feed each 100 chicks about 3 dessertspoons of fine chick feed, such as pinhead oatmeal and crack corn each day. Sprinkle this in the litter for exercise.

If milk is given to drink make out 75 per cent. of the beef scrap, and if milk and water are both given, remove one-half the meat scrap.—W. R. Graham, Poultry Dept., O.A.C.

### Salt Boxes for Black Salt.

When black salt is thrown on the ground and left there for the cattle, much of it is wasted by dissolving next to the damp ground or in rains. Black-salt boxes of concrete are easy to make.

Set a form made of ten-inch boards and about eighteen inches square on the ground and pour in four inches of concrete. Wrap a block of salt with a thick pad of newspaper and set it on this concrete. Pour concrete around this until the form is full. Tear the paper away from the top of the salt block and let the cattle get to it.

SHIP US YOUR POULTRY, GAME, EGGS, BUTTER AND FEATHERS. WE BUY ALL YEAR ROUND—Write today for prices—we guarantee them for a week ahead. P. POULIN & CO. LIMITED. 36-38 Bonaventure Market—Montreal.

TORONTO OFFERS BEST MARKET FOR Poultry, Butter, Eggs. We Offer Toronto's Best Prices. LINES, LIMITED. St. Lawrence Market, Toronto 8.

HUNDREDS of farmers and dairymen and others are making extra money by shipping us all kinds of used, empty bags. You can do the same. We pay the freight and also highest prices. Write us and we will send you full information and shipping tags. No quantity too large or too small. Write now to SENDEL & GORDON. 21 Duke St., Montreal, Que.

TAYLOR-FORBES Tree Pruners. For every purpose in the orchard, cutting limbs up to 14 inches. Handles 4, 6, 8, 10 and 12 feet. Your Hardware Dealer knows the quality. Our descriptive circular sent to any address on request. TAYLOR-FORBES COMPANY, LIMITED. GUELPH, ONT.