The Automobile

BUY ACCESSORY AT RIGHT TIME.

Practically all automobiles come well equipped with such articles as headlights, tail lamps, windshields, top cover, side curtains, speedometer and horn. Then there is usually a tool outfit for use in keeping the car in good condition and for making minor mechanical repairs. This generally includes a tire pump, jack, tire-repair kit, a variety of wrenches to fit the various auts and bolts, oil can, grease gun, screw driver, magneto-adjusting wrench, an instruction book and some other things, varying with the car.

After this, one can consider the numerous additions which may be made by way of tools and devices which some motorists consider desirable. These may include a trouble lamp attachable to a socket on the dash, stop light, motometer, sun visor, lubricator, trunks, spring covers, special license holder, mirror to enable the driver to see what is going on in the rear, timescope, gasoline gauge, clock, radiator shield, hydrometer for testing the battery, radio outfit, cigar lighters, foot warmers and elaborate light tour limousine. It is easy, however, to load up the battery with too many devices which operate by electricity. When it comes to tools one should aim to have plenty for ordinary requirements.

For instance, a good selection of tools will include everything that is likely to be needed while on tour. However, such accessories should not be allowed to take up a large amount of room. They should be capable of being packed in such a small place that they are not constantly getting in the way. The special tools furnished by the manufacturer should always be carried along and taken good care of, as nothing else is handy to meet quite so well the needs that may arise.

CARRY SUPPLY OF LINKS.

You can never tell what the weather is going to be an hour after you leave your garage for a drive. To be caught out on the road in a storm is not uncommon. In such an event you might be faced with the necessity of putting on non-skid chains. This means in the first place that it is very desirable to supply your car with such chains. Though these are in good condition when leaving the garage, after running a while over rough roads at a fair speed, some of the links may wear through and begin to thrash against the mud guards. This is anoying and is apt to be damaging to the mud guards. This means, in the second place, that it is desirable to carry a supply of links and a chain tool so that the broken ends can be removed and broken links can be replaced.

Some motorists would not venture forth without a folding pail. Perhaps they have had the distracting experience of climbing up a very long hill to find the water in the radiator boiled away. While the cooling systems for automobile engines to-day are very efficient and while it is only in exceptional cases that the water will boil out of the radiator, yet when this occurs the results are liable to be disastrous. While tire troubles are less and less in evidence they do occur once in a while. To jack up a wheel to change a tire, on dirt and sandy roads especially, is something most difficult. The jack sinks into the loose sand or dust instead of lifting the car. If you have handy a block of wood an inch thick and about six inches wide and a foot long it will be a ready solution to your problem.

TOW ROPE IS FRIEND IN NEED.

It is not easy to keep the hands clean while working about a car. Grease and grime get on the hands and oil is often hard to avoid. Therefore many owners carry a small bag of waste or rags. Then it is desirable to have a three-in-one or similar tire-valve tool with which it is possible to remove the valve plunger, clean up the threads in the valve stem so that the plunger may be properly seated, and trim the damaged threads on the outside of the stem so that the cap will screw down tight. The valve stem may become battered in changing a tire so as to prevent air being forced into the tire.

A tow rope is another useful accessory. You may need it yourself or it may be used to help a fellow motorist in distress. A rope can also be used instead of chains if there are no chains and the car is stuck. In fact, rope when wrapped about a tire is superior to cains in very sandy of muddy places. An extra set of electric-light bulbs and an extra electric fuse should also be carried.

In the interest of safety, aw ind-

In the interest of safety, a windrain or snow is almost a necessity when driving in stormy weather. Shock absorbers are often found to decrease the shock from rough roads. Bumpers fore and aft are increasing in popularity.

Other accessories which might be suggested include a wrench for adjusting ignition interrupter points, one set of ignition brushes, several extra spark plugs, cleaned and adjusted ready for use, half-dozen valve plungers for inner tubes, squirt can full of oil, box of assorted nuts, box of assorted cotter pins, box of assorted cap screws, box of assorted washers, a spool of soft iron wire and a roll of friction tape. Once these matters are attended to the motorist can free his mind from the details.

Natures Change of Clothes.

There must be many people who have actually seen a toad get out of his skin, and, arrayed in a brand-new one, which was ready grown underneath, proceed to swallow his old suit!

This is not romance, but plain fact. All reptiles shed their skin, but not until they have acquired the toad's habit of swallowing the old one. The reason this change of clothing is not witnessed more often is that reptiles seek privacy for the operation, as whilst it is in process they are handicapped, and might be at the mercy of an enemy.

Every bird, too, changes its clothing at least once a year. The moulting of the old feathers is done without much fuss, and nature gives every bird a new rig-out in a very short time, renewing color and texture according to breed and variety.

Your pony, your dog, and your cat also shed their clothes and grow a new suit, and so do all wild animals. Both in fit and style nature makes an excellent and efficient clothier. Insects in the larval stage also cast their skins, and always there is a new one underneath. Some shellfish do the same.

The Land of Big Timber.

Recently an official representing the Dominion Government came to British Columbia with an order in his pocket for 125 pieces of squared timber of unique strength and record dimension, to fill an extraordinary engineering specification.

To give some idea of the size of these timbers the total board measurement of the 125 pieces approaches one million feet. They must also be without defect.

A search of their limits for trees to produce these huge sticks will be made by prominent B. C. logging firms and there is no doubt but that the "goods" will be found, and delivered.

The incident illustrates the wonderful quality of British Columbia's timber stand. Only the Douglas fir area of the Pacific Coast could fill an order for timbers of such strength, size and soundness.

At the same time, only the costly modern equipment installed by the loggers will enable the logs for this order to be yarded and transported from the woods, and only the up-to-the-minute machinery of the manufacturer will permit their sawing and squaring to the required dimension.

Shocked the Bishop.

A bishop was paying a visit to a certain parish and decided to address the children of the Sunday-school.

He had noticed many large bills about referring to "the Bishop's visitation," and accordingly began his talk by asking the children the meaning of the word "visitation."

"Please, sir," replied a young urchin, "it's a plague sent by Providence."

Red-Light Gloves.

Luminous gloves are being worn by motor drivers in Paris. A red light showing on the back of the outstretched hand is switched on by bringing the thumb and forefinger together.

Funnier Than Fiction.

A certain young man became a member of the French Civil Service in 1922, and from that time a hat, a coat, and a pair of gloves at his desk bore mute testimony to his existence. This evidence was confirmed by his regularity in collecting his salary. But, otherwise, he was never seen or heard of at his office.

He was transferred to another office, and his hat, coat, and gloves changed their quarters. But otherwise, there was no change. Eventually, it was discovered that he was a professional dancer, and was too busy to attend the office.

The authorities were shocked, and resolved that the young man must be punished. But the only two possible punishments were dismissal and reduction in grade. The first seemed too severe; as for the second, the young man was already in the lowest grade. Finally, the Gordian knot was cut—the young man was promoted, and then immediately reduced to his former status.

Hack Saw Makes Rougher.

The roughening of an inner tube that is to be repaired or a cone clutch lining or brake band lining that is to be cleaned can be readily done with a tool made from an old hack saw blade cut down at one end to fit a file handle. This will be found handier, more convenient and durable than an abrasive substance such as sand or emery paper.

Method of Producing Horticultural Shrubs

By Prof. A. H. MacLennan, O.A.C.
For the Can. Horticultural Council.

Under the term horticultural shrubs, such a wide and varied list of plants is involved that of necessity the subject of producing these shrubs is one demanding not only a knowledge of the technique of propogating but a knowledge as well of the nature of the plants themselves. This latter idea is borne out by the fact that certain plants can be propagated successfully by the sexual or seed method while others which will not come true to type from seed must be propagated by grafting, budding, cuttings or some other of the asexual methods.

It is not the purpose of this article to outline in detail the propagation methods for all types of horticultural shrubs, but merely to draw attention to the more common ways and to cite examples of shrubs on which these methods are used.

In the case of sexual propagation the field is limited to plants which are self-fertile and consequently will come true to type from seed. Some of the more common shrubs grown from seed are the Barberries, Viburnums and certain of the Hawthorns. With seeds which are contained in a pulpy fruit it is necessary to allow the fruit to ferment in order that the seed may be readily separated out. Some seeds are sown as soon as ripe while others are held over till the following spring and in some cases for a year or more. Stratification is the term applied to the freezing of seed to help crack the seed coat and this practice is followed by many nurserymen.

Seed is generally sown in light sandy soil and when planted in the fall the ground should be mulched with straw or leaves to give protection during the winter. Cold frames make a good bed for starting seed.

Some of the evergreen shrubs are grown from seed in this country, although the majority of them are imported from European countries where labor is cheap and the climate more favorable. Evergreen seedlings require shading during their early life and are very liable to damp off if the soil has not been disinfected. Sowing the seed thinly in sandy soil and growing the seedlings with a minimum of water will help to quite an extent to check damping off.

Probably the most common method of producing shrubs is by cuttings. Almost any plant can be propagated in this way although in some cases better methods have been devised. There are various types of cuttings, the most popular of which are the hard and soft wood cuttings.

Hard wood cuttings are usually taken in the fall from well ripened wood of the previous season's growth. The wood should be cut into pieces from 5 to 8 inches in length, usually with three or four buds on each. There seems to be no great difference as far as ability to root is concerned between cuttings which are taken through a bud and those which have their first bud farther up the stem, although many growers favor the former method.

Success in rooting cuttings depends on the production of callus over the lower end of the stick. Callus is a spongy material laid down by the activity of certain plant cells in an effort to close over the cut and it is from this callus that roots arise. Callusing can be hastened by burying the cuttings upside down in moist sand so that the root end will be exposed to a warmer temperature than the rest of the cutting. In this way the buds are not so likely to become active too soon. These cuttings may be planted in the fall as soon as they have callused or they may be stored in a cellar over winter in boxes of moist sawdust or sand and set out in the spring. Many of the common shrubs such as Deptzia, Wiegelia, Forsythia, Hydrangea and Spirea are usually propagated by this method.

Hardwood cuttings are sometimes used in propagating evergreens. more particularly those types which cannot be grown true to type from seed. Since evergreens are usually slow in rooting the heel and mallet types of cutting are often used. These consist of a small portion of the main stem along with the cutting, the idea being to provide an extra supply of stored food on which the cutting may draw while it is forming its callus. Ordinarily evergreen cuttings are set out in the fall and given winter protection. Cold frames are often used for this purpose.

Soft wood cuttings may be taken in early summer from new wood. They are usually set in a propagating bed of sand and are kept sheltered from the sun and wind until rooted. This method is usually practised in the greenhouse or in frames. Cuttings should be planted out as soon as they have rooted.

Grafting is used as a means of propagating some roses and some of the evergreens. With most shrubs, however, results can be obtained more quickly by using cuttings. Budding, which is really a form of grafting, is used on roses hawthorns, lilacs and the various types of flowering plum. This method can be used on almost any type of shrub and is particularly useful in the case of rare stock as it is economical of material.

Another method which is sometimes used is mound layering. This consists of cutting back the bush severely to force the development of numerous young shoots. At the same time soil is heaped up in the centre of the bush. The new growth coming up through the soil will form roots and can be cut off from the parent plant the following year.

The care of newly propagated stock is a subject worthy of brief consideration. Ordinarily the seedlings or rooted cuttings are set out in nursery rows, sufficient room being given to allow proper development. Frequent and thorough cultivation is absolutely necessary in the nursery if the young shrubs are to make good growth. Shrubs should never be left in the same place in the nursery for more than three years as they will have a tendency to spoil their form by crowding and to develop long tap roots which make them poor transplanters.

Nothing has yet been said regarding the producing of new varieties of shrubs. Ordinarily these are the result of crossing two varieties within the species and of growing the seed which is produced. If proper precautions have been taken to insure a successful cross, the grower should expect some seedlings which would combine the characters of the two parents. In this way some superior individuals may be produced which may then be propagated asexually.

Occasionally new varieties may originate from bud sports. For no apparent reason a certain twig on a bush bearing green leaves may show a red or purple color. Usually these sports can be propagated asexually and will come true to the type. There is some evidence to show that variations can be produced by grafting on different stocks, but this is not followed to any extent in the productiaon of horticultural shrubs.

Animal Centenarians.

The greatest age that can be attained by the various species of animals varies considerably. Among mammals the large animals usually live longer than the small ones, but this law is not valid among birds, the parrot, for example, reaching the same age as the eagle.

Spiders live one to two years; beetles have been kept prisoners for five years. The queen bee often lives for five years, while the working bees usually live only six weeks. Ants have been kept in captivity for fifteen years, while the toad has been known to attain forty years. A turtle was kept in captivity for 150 years, and the specimen in question may have been 300 years old.

The age of birds is known best. The household cock lives fifteen to twenty years; the goose and the elder-duck, 100 years; the swan, 102 years; the stork, seventy; the falcon, 162; golden eagle, 104; the blackbird, teen; the canary as much as twe four, and the parrot about 100 yea Of the mammals, the horse attains forty to sixty years; the sheep, twenty; the dog, twenty-eight; the cat, twenty-two; and the elephant and the whale 200 years.

The Potato on Trial.

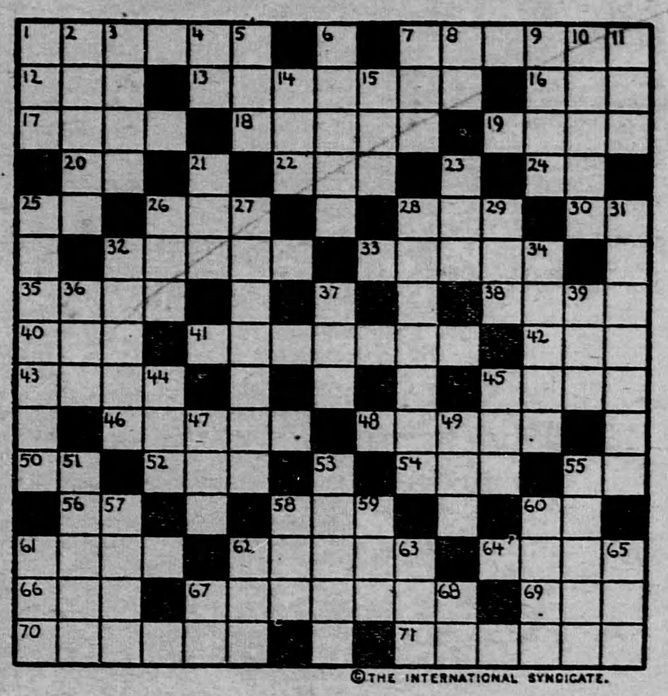
It took people a hundred years to discover that potatoes were good to eat.

In 1728 an attempt was made to introduce potatoes into Scotland, but they were denounced from the pulpit on two contradictory counts—that they were the forbidden fruit, the cause of Adam's fall. They were accused of causing leprosy and fever.

Not Honey in the Flower.

Honey, as such, is not present in the flower, but is a substance that has been partially digested by the bee.

CROSS-WORD PUZZLE



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HORIZONTAL

1—A great island N. of Canada
7—A synagogue ruler whose daughter was raised from the dead
12—Girl's name
13—A city in Venezuela
16—Suffix, meaning "of the nature of; like"
17—A cape on the coast of Newfoundland
18—A tambourine
19—An entrance or passage (mining)
20—One of the churches (abbr.)
22—Achieved
24—Prefix meaning "from, out of"
25—Personal pronoun
26—A kitchen utensil
28—Preposition
30—Close to, by
32—A woodland deity
33—Merciless
35—A wading bird
38—An entrance way
40—Man's name (familiar)
41—Kind of ship Columbus sailed in
42—Relative pronoun
43—Fiber of a tropical American plant
45—A laborer on a Mexican estate
46—Ago (poet.)
48—Sorrow or suffering (poet.)
50—A weight (abbr.)
52—A stay-rope
54—Middle (abbr.)
55—Preposition
56—Part of verb "to be"
58—Member of a City Council (abbr.)
60—To exist
61—A country of S. E. Asia
62—An implement for separating grain by beating
64—Exclamation of regret
66—Possessive pronoun
67—A military title
69—Man's name
70—To summon and gather together
71—A province in east Canada

VERTICAL

1—To shut out
2—To conform
3—Front
4—Suffix used as an adjective termination
5—Man's name (familiar)
6—Toil
7—A container
8—Like
9—An excursion by any means of conveyance
10—A city of east-central New York
11—Fixed in opinion
14—Uncooked
15—To peruse
21—A small bed
23—Girl's name (familiar)
25—Standing at the beginning
26—A step, a dance
27—Despotism
28—Liberty
29—A color
31—A city of Ontario, Canada
32—A city in Punjab province, India
34—Reduce in value
36—A receptacle
37—A vessel for holding liquids
39—Interjection
44—Farm product
46—Seed-case
47—Possessive pronoun
49—Cover of a receptacle
51—A large group of South African tribes
53—To utter heedlessly
55—To vex
57—A lump
58—A high mountain
59—Prefix meaning "through"
60—To tell tales
61—Purpose
62—At a distance
63—Liquid (abbr.)
65—A cavity or receptacle
67—A degree (abbr.)
68—Name unknown (abbr.)

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MUTT AND JEFF

MUTT SHOULDN'T CONFUSE JEFF WITH SUCH FANCY WORDS—By Bud Fisher.