

Conservation

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Tree Planting on the Prairies

What One Teacher Accomplished—
A Centre for Neighbourhood
Improvement

A certain teacher in a rural district in Saskatchewan, having prepared the ground last summer, has planted nine hundred young trees at his school this spring. The varieties include Manitoba maple, green ash, golden willow, Russian poplar and caragana. In addition to this, he has a flourishing school garden. As a result of his work, the people of the district—mostly Germans—are applying to the Indian Head nurseries for over 50,000 trees for the spring of 1915.

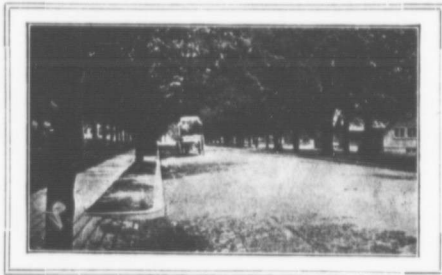
The importance of tree planting on the wind-swept prairies of the Canadian West is obvious to anyone who will give the matter a moment's reflexion. Yet why is not more of it done? We often hear it said that the farmers have not the time. But in any district where an enthusiast begins the good work, others follow; the essential thing is to stimulate interest by a concrete illustration of what can be accomplished.

If every teacher in the West would emulate this young man's example a change could be wrought in the appearance of the Canadian prairies and the general comfort of western life that, in a very few years, would amount to nothing short of a revolution. Some day the casual traveller between Winnipeg and Calgary will no longer turn wearily from the car window and sigh for a change of scenery, but will write to his friends of the charm of peaceful homes, each snugly sheltered by its grove of trees and surrounded by its garden of bright flowers. This is no mere idyllic picture; it is within the scope of art to make the prairies as attractive as any countryside that inspired the songs of Tennyson or of Burns.—P.M.B.

FORESTRY CONVENTION

The fifteenth convention of the Canadian Forestry Association will be held at Winnipeg on July 7, 8 and 9.

The world owes you a living, but you must be your own debt-collector. Get busy.



A Waste of Pavement

This street exemplifies a common fault in residential street-making. The pavement is too wide, for the traffic is light. A narrower pavement would permit a wider boulevard. See page 4, "Streets we Like to Live on."

The Smoke Nuisance From Round Houses

A Method has been Discovered for
Abating the Smoke Nuisance
from this Cause

There is little excuse for dense smoke arising out of the operation of stationary plants, as this can be overcome by the use of mechanical stokers using a fuel adaptable to the class of work required. In the case of roundhouses, however, some allowance must be made, as the dense smoke is formed by the lighting of fires and by the banked fires of standing engines.

The nuisance resulting is considerable for two reasons. (1) Round houses are generally situated within the city limits and near residential districts. (2) The ordinary arrangement is to discharge the smoke from the roundhouse by short stacks. In this way the smoke is more liable to be a nuisance than when discharged from a tall chimney.

The following method of smoke elimination has been used successfully at a 30-stall engine house situated in a residential district of Chicago. The smoke from the stacks is drawn into a main flue by means of exhausters and discharged into a series of washeries, the number depending upon the amount of smoke to be treated. Live steam is also added between the flue and the washery. In washing, the smoke is passed through water, under a head of about one inch. This is done in two similar compartments in series. It is estimated that the process will remove

practically all the consumed carbon and 75 per cent. of the acids and gases.—W.J.D.

Co-operation Reduces the Cost of Living

Civil Servants Reduced their Grocery
Bills 2 Per Cent.

Ottawa Civil Servants are cutting down the cost of living. For the year ending March 31, last, they paid 2 per cent less for their groceries than other householders. They were enabled to enjoy this reduction because they have joined together to form the Civil Service Co-operative Supply Association which runs a first-class grocery store. Members of the Association received a dividend of two per cent. on all their grocery purchases for the past year. The Association is not yet two years old and every indication points to the fact that larger dividends will be forthcoming in the future.

Some noteworthy facts are presented in the annual report. One is that the store did a business of practically \$1,000 a week on a capital of \$2,570. Another is that the cost of delivering goods amounted to slightly over \$3.60 on each \$100 worth of goods sold. In the average grocery store about two thirds of the goods sold have to be delivered. According to this, about 5½¢ is paid for delivery charges on every \$1.00 worth of groceries delivered. This reminds one of the statement of James J. Hill, that the cost of high living and the high cost of living are often confused.—M.J.P.

Processes Used in Butter-Making

Simple Rules for Making Good Butter—
The Part Played by Bacteria
—Directions for Churning

Some bacteria are good friends of the butter-maker, while others are very bad enemies. The ripening of cream is mainly due to the work of the good bacteria which it contains, and these small germs thrive best when the cream is kept warm. The bacteria which are of greatest aid to the dairyman are the lactic acid germs. A pure culture of these germs is known as "starter." Starter is used by the best butter-makers for ripening cream and gives to the butter that fine flavour and aroma so much desired.

There are other bacteria which cause trouble in butter-making. Among these are the bacteria which turn milk blue, red, and occasionally yellow. Others produce a curdling of the milk without souring. Some produce gas accompanied by bad flavours. Some make the milk very bitter, others give it a soapy taste, a fruity taste, or a strong barnyard odour, and some make the milk slimy or ropy, so that it can be drawn out into long threads.

Trouble from any of these is usually the result of carelessness or unsanitary conditions. These

(Concluded on page 2.)

Alfalfa Fireguards

Much of the loss to crops, buildings and other improvements, caused by railway fires in cultivated sections of the Prairie Provinces, could be avoided if farmers would raise some non-combustible crop on a strip of land adjacent to railway rights of way. Alfalfa is suggested in this connection, since this crop will not burn and a narrow strip would form a thoroughly efficient fireguard. Where clover can be grown successfully, it will answer equally well. The growing of potatoes, beets, or other root crops will serve the same purpose, where local market conditions will permit. This would also be a step in the much-to-be-desired direction of diversified farming.—C.L.

Economies in House Painting

Recent Improvements have Cheapened Materials—But Decorators Have Hindered their Extended Use

Much real progress has been made within the last decade in improving materials for painting, but the prejudice of painters against new substances has prevented the public from getting the full benefit from them. Most of the knights of the brush still cling tenaciously to a mixture of white-lead, linseed oil, turpentine, and patent driers. This makes a good point for certain purposes, but, in some respects, a much better paper can be made by using other materials.

White Spirit vs Turpentine

What is known as white spirit seems to be in every respect equal to American turpentine for most purposes, and costs considerably less than half the price, but the prejudice already referred to compels many manufacturers to send it out mixed with a little genuine turpentine, solely to give it the characteristic odour.

Lead has three serious defects: it is poisonous, it is very susceptible to the action of sulphur—a great disadvantage in a smoky atmosphere—and it has a tendency to chalk when used in certain situations, particularly on the seashore. The pigments which may be used instead of lead are all zinc compounds, and are non-poisonous. By far the most important is zinc oxide, which is not affected by sulphur, and is suitable for use by the seashore, where lead fails. When properly mixed, it has quite as good body as lead, but will be ruined when mixed with patent driers. Zinc manganese or cobalt driers, zinc liquid form must be used.

Zinc Paints for Interiors

A second zinc product, lithopone or zinc sulphide, is very suitable for interior work. However opinion may differ as to the durability of zinc compounds when exposed to the weather, their non-poisonous character makes them much superior to white lead for interiors.

Most water paints are made on a base of lithopone. They are produced in many beautiful colours and give ample facilities for producing an artistic effect, especially when there are many pictures to be hung and a plain background is advisable. They give excellent and most economical results as undercoats for oil paints.

The old-fashioned paint removers are rapidly giving way to a class of paint-softeners made from acetone, alcohol, and other substances, which do not injure the hands of the operatives. Moreover, the work requires no treatment after the paint has been scraped off.

Butter-Making Processes

(Continued from page 1)

germs get into the milk at the time it is drawn from the cows or afterwards. Milk in the udder is practically germ free. There need be no fear of these harmful bacteria in milk if cleanliness is practised and if the two safest and best means to check their growth are used, viz., extreme heat and cold.

Pasteurization of Cream

Pasteurization of cream has become justly popular. While it does not remove all the ills which are apt to befall cream, it does prevent the following services:

1. Drives off bad odours, especially those due to feed.
2. Destroys most of the bacteria, leaving a clean seed bed for the added culture to work in.
3. Produces uniformity of flavour from day to day.
4. Makes the cream easier to churn.
5. Adds to the keeping qualities of the cream and butter.

The process of pasteurization is a simple one. To pasteurize cream, place the container in a vessel of hot water. Stir the cream occasionally and bring it to a temperature of 175° F. Leave it covered at that temperature for twenty minutes. It will cool very little if lifted out of the water. Then cool rapidly to 60° F. Pasteurized cream remains sweet for several days. "Starter" must be added to it if ripened cream is desired for churning.

Directions for Churning

With right conditions, a temperature which brings butter in from 20 to 30 minutes, is the correct one. A range of temperatures from 54° to 58° F. for summer, and from 56° to 64° F. for winter, meets usual conditions.

When necessary, add just sufficient butter colouring of a reliable brand to give the butter a clear yellow tint.

The greater the speed and the farther the drop of the cream inside the churn, the greater will be the force applied to the fat globules, and the more quickly they will merge together and form butter.

When the butter is the size of wheat grain, it is sufficiently gathered. The buttermilk may then be drawn.

Washing and Salting

Temper the wash water in winter, having it from 50° to 56° F., according to the condition of the butter and the temperature of the room. In hot weather, the wash should be as cold as possible. As a rule, good butter should be washed but once. The more butter is washed the more it is robbed of its flavour.

The salting of butter depends on personal taste and the amount of salt used should be determined by the consumer, rather than by the producer. If the butter is for

immediate use, three-quarters of an ounce per pound of butter is usually sufficient.

Butter should be worked just enough to expel the excessive moisture and to thoroughly distribute the salt. Any portion not reached by the salt will be light in colour.—K.M.F.

Costs in Farm Poultry Keeping

What Does it Cost You to Feed and Keep your Poultry? Some Actual Costs Determined by Experiment—Farm and Town Poultry

Recently, some valuable investigations have been carried on in Ohio with regard to profits in poultry keeping. The best results came from a farm flock of 96 fowls, which gave a net profit for the year above feed and labour of \$237.37, or \$2.47 each; the lowest results were from a town-flock of 30 fowls, which gave a net loss of \$27.90, or a loss of 93 cents each. Out of twelve town flocks four showed a loss, while of eighteen farm flocks, every one showed a profit, ranging from 14½ cents to \$2.47 per fowl.

The average number of eggs laid by each hen on farms was 71 as compared with 70 in the town flocks. The profits, therefore, with farm flocks did not arise from the difference in egg production, but rather from the lower cost of feed and labour and from the methods of management. The cost of feed for twelve town flocks and one commercial flock averaged 97 cents per fowl yearly, as compared with an average of 61 cents on 18 farms.

The great difference in favour of the farm flocks is attributed to a number of causes, such as the use of the gleanings from harvest fields, orchard and garden, waste products—like cabbages and beets from the storehouse—the use of extensive pasture, weed seeds and insects, dairy by-products, and the lower price of grain consumed by hens of the farms. The labour cost on farms and in towns averaged 28 cents and 60 cents respectively—another great difference in favour of the farms.

It was also learned that, in both town and country, the small flocks gave greater profits than large ones; that fowls with unlimited range did better than those partly or wholly confined; that, to compete successfully with farm flocks, the town poultryman must keep high-producing hens and sell at a higher price; that a poultry system which requires the keeping of fowls confined or which necessitates a large amount of personal supervision, has no place on a general farm; and that a better system of marketing eggs and poultry is needed—one that will encourage the production of a high-grade product carefully and expeditiously transported to the consumer.

Railway Fires in Forest Reserves

A New Law—Railways under Construction Must Take Precautions Against Fire

An amendment to the Dominion Forest Reserves and Parks Act provides that "When a railway within a forest reserve is being constructed or operated by a company not under the jurisdiction of the Board of Railway Commissioners for Canada, the Minister of the Interior may require such company to establish and maintain an efficient and competent staff of fire rangers, equipped with such appliances for fighting fire or preventing fire from spreading as the said Minister deems proper, and to provide such rangers with proper and suitable equipment to enable them to move from place to place along the line of railway."

"The said Minister may require such company to maintain an efficient patrol of the line of railway and other lands in the vicinity thereof to which fire may spread, and, generally, may define the duties of such company, and of the said fire rangers, in respect thereof."

"For the purpose of fighting and extinguishing fire, the said fire rangers may follow fires which spread from the railway, to, over and upon any lands to which they may spread."

"The said Minister may require such company to make returns of the names of fire rangers in its employ in the performance of the said duties, and of the places or areas in which they are engaged."

The above amendment is similar to the provision in the Railway Act, applying to lines subject to the jurisdiction of the Railway Commission. Too much care can not be taken to prevent forest fires, and the action voluntarily taken by railway companies in the past has been far from adequate.

Stamping Out a Smallpox Plague

The most striking example of the preventive effects of vaccination, which perhaps has occurred in any country, certainly in modern times, is that of the Philippine Islands. Prior to 1903, some 6,000 deaths each year were due to smallpox. In that year the United States authorities, believing in its efficacy, introduced the practice and their officers performed the enormous number of 3,094,635 vaccinations, this effectually stamping out this horrible plague.

This is but a modern instance of an old and sound scientific practice, which, unfortunately, today is being neglected by parents, municipal authorities and governments. Such neglect has entailed heavy loss upon many communities; we should be wise before it is too late.—C. A. H.

Lengthening the Life of Railway Ties

With New Zinc Chloride Treatment, Inferior Woods Will Last as Long as Ordinary Cedar

A growing interest in the subject of preserving timber against decay is being manifested by the users of railway ties. This is largely due to the rising price of woods such as cedar, which resist decay without any special treatment. A British firm has recently established a large plant, 28 acres in extent, at Fort Frances, Ont., for preserving ties by means of zinc chloride with the addition of sulphate of alumina to prevent leaching. The prepared solution is forced at high pressure into thoroughly seasoned lumber, so that it permeates every part of the wood, and being aqueous, readily mixes with any slight moisture that may lurk in the inner pores. Wood treated in this manner has been reduced to sawdust, washed for over an hour, and yet still contained a large proportion of zinc chloride. This compound has the further advantage, as compared with creosote, of cheapness, and of being colourless and odourless. Moreover the preserved wood may be painted or polished.

The causes of destruction of railway ties, in order of importance, are decay, mechanical wear and insect pests. Treatment with zinc chloride or creosote will so overcome decay as to more than double the life of a tie, and will keep away the insect pests entirely. Mechanical wear may be reduced by the use of flat tie-plates of either metal or hardwood to lessen the cutting of the rail-base, and of screw-spikes to minimize the wear due to spike-pulling. Though at present such devices are not common outside of Europe, yet with the growing employment of soft woods such as jack-pine and spruce, some such precautions will shortly need to be adopted in Canada, perhaps with the anomalous result of giving us a safer track.

Improvements in Street Traffic

Canadian cities have not been behindhand in inaugurating and extending street railway systems, and some of them have now an excellent service. There is still room for improvement, however, and, in this connection, it is interesting to cast a glance at the developments in other countries.

A Glance at Systems Overseas

England, which learned from America to apply electricity to her tramway problems, has now in some respects bettered the instruction. Municipal ownership is, in the Old Land, not the exception, but the

rule. The fares are, on the whole cheaper. On this side of the Atlantic, we pay 5c to go one block and 5c to go perhaps 20 miles. In England they pay according to distance, but some fairly long rides can be had for a penny. As the ordinary passenger on a street car seldom rides more than one mile, it is generally the case that the Englishman pays two cents where the Canadian would pay five.

In Britain they have doubled the capacity of the cars by adding an upper deck. Nowadays this is covered. Smoking is permitted upstairs, with the result that the majority of the men go aloft, and the lower compartment is left largely for the ladies.

The underground trolley system has been adopted in London, and in some United States cities. It is more expensive to install than the overhead trolley, but the advantage of doing away with the unsightly and dangerous poles and wires cannot be over-estimated.

Advantages of the Autobus

Gladstone told an American tourist that the way to see the largest city in the world was "from the top of a bus, sir, from the top of a bus." If Gladstone could stand in the Strand to-day, he would see a great transformation. The visitor can still see London from the top of a bus, but it will be from the top of a motorbus. There is a probability of this vehicle being introduced into Canada. It is reported that a company has recently obtained a charter from Montreal to install a service there, and steps are being taken to establish one in Winnipeg.

Experts are not wanting who prophesy that the autobus is destined to become a formidable competitor of the street railway, for the former undoubtedly possesses some important advantages. It is more accommodating than the trolley car. It impedes other traffic for less. It picks passengers up and sets them down at the curbstone. It can change its route at any time. If one bus breaks down, it does not keep a line of others waiting, and the next that comes will pick up the passengers and take them along with a minimum of delay. Wires and poles are not needed and their absence would not be regretted. In short, the autobus is especially suited for work in busy streets and for special temporary services, though the electric car will probably hold its own for suburban traffic.—P.M.B.

Refuse Disposal

A Pamphlet That May Be Had by Municipal Authorities for Free Distribution

While the civic authorities of every modern community recognize that it is their duty to provide for the efficient and sanitary removal of sewage, most Canadian towns lag sadly behind in the matter of providing for the clear-

ing away of waste paper, bottles, tin cans, garbage, scraps of lumber, rusty iron, old clothes, mattresses, and a thousand and one other articles offensive to the nose or eye, which may be lumped together under the term "refuse".

This question of the disposal of refuse is dealt with in a vigorous and popular way in an illustrated pamphlet, now in course of publication by the Commission of Conservation. The Commission is asking the co-operation of the medical health officers in the various towns and cities throughout the country in distributing this pamphlet, and it is hoped the demand for it will be as large as the importance of the subject merits. Pamphlets may be secured gratis by all bodies or persons interested, by applying to the Secretary, Commission of Conservation, Ottawa, Ont.

Traction Ditchers Are Now Duty Free

Credit for it is due to Agricultural College Professor—Means \$100,000,000 a year to Ontario

The credit of having traction ditchers placed on the free list, and the consequent estimated saving of \$100,000,000 to the farmers of Ontario alone in increased crops, is primarily due to Prof. Wm. H. Day, of the Ontario Agricultural College, Guelph. Prior to the last session of Parliament, when the duty was removed, farmers importing ditchers had to pay from \$425 to \$750 as duty on each machine, and this notwithstanding the fact that such machines were not made in Canada.

As early as December 14, 1910, Prof. Day wrote to the Commission of Conservation asking its assistance in the matter. The Commission at once made representations to the Government and received favourable assurances. When the present Government came into power these representations were renewed by both Prof. Day and the Commission, with the result that the duty was removed.

Wet lands when underdrained produce increased crops annually to the value of \$20 to \$40 per acre, and ordinary farm lands when underdrained give an annual increase of \$10 to \$20 per acre in crops. In "Old" Ontario some 4,000,000 acres of ordinary lands are in urgent need of under-drainage, and it contains, also, no less than 5,000,000 acres of slash swamp, marsh and waste land, now comparatively useless, but most of which may be reclaimed by under-drainage. A very conservative estimate allows that 3,000,000 acres of these lands may be so reclaimed, adding \$60,000,000 to the earnings of the farmers. This, added to the value of the increased crops due to the drainage of lands now under tillage, would mean a total increase exceeding \$100,000,000 per year. —M.J.P.

Flood Damage

Only too frequently people fail to recognize that they themselves are largely responsible for the disaster brought upon them. When floods occur, the sentiment in the territory affected is usually that the Provincial Government or the Federal Government is largely responsible because reservoirs had not been provided. Such judgments are usually unreliable and in cooler moments sane observers recognize that relief must be sought by the communities.

In cities and towns, buildings and other constructions are erected on the flood plains of the streams. During freshets, the water, thus prevented from spreading out over the lowlands adjacent to its banks, will inevitably rise, as in the recent disastrous floods in the United States, often reaching heights never before recorded.

Representatives of Ohio cities recently presented to the investigating board of engineers the following resolutions:

"That laws or rules be adopted to regulate encroachments, contractions or obstructions to the natural or established channels of rivers and flood plains by property holders, riparian owners, state, county and municipal authorities.

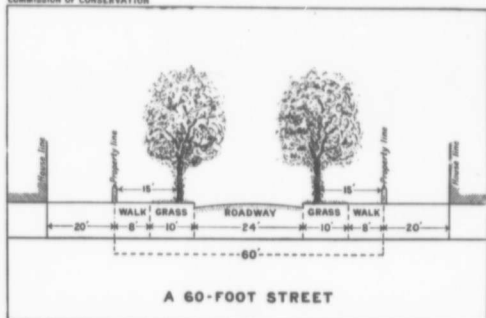
"That all rivers which have had their natural channels and flood plains diverted, contracted or obstructed to the extent of being dangerous in times of flood, be corrected or restored to a condition making them as safe as possible for quickly carrying off their flood waters.

"That federal, state, county and municipal co-operation be urged in constructing, where feasible, such works as are necessary to protect lowlands against flood waters."

It is refreshing to note that the Ohio municipalities acknowledge their "contributory negligence" and their responsibility for the cost of restraining works. The investigation by the board of engineers also showed that the losses were, to a large extent, due to neglect of engineering advice given to them respecting flood prevention. One city had been advised by an engineer to raise its levees, but nothing was done. Another had surveys made and contemplated prohibiting encroachments on the stream banks but "nothing was done." In another city, an engineer reported that raising a dam would probably result in damage should there be a flood higher than hitherto recorded. The flood came, the city was sued for heavy damages, and the plaintiffs won their case.

These instances are not exceptional, and demonstrate that, in closely built municipalities, disastrous floods will inevitably follow encroachments on the old flood plain, unless levees adequate to cope with the highest freshets are provided.

COMMISSION OF CONSERVATION



A 60-FOOT STREET

Streets we Like to Live on

Most Canadian cities and towns are spending too much money on their residential streets. Canadians are possessed of the idea that the whole width of a high-class residential street must be paved. This idea would not prevail long if people here could but get a glimpse of the residential streets in English garden suburbs, where far more serviceable and far more beautiful streets are maintained at only a fraction of the cost of those in Canada.

Canadians wrongly assume that residential streets are to be used for heavy traffic and pave them with expensive pavements from sidewalk to sidewalk. As a matter of fact the traffic on a residential street consists only of light delivery wagons and a few carriages. The volume of traffic is so small that, when we really come to think it over, it is a wonder why we consider fully 30 ft. of the width of a 60-ft. street necessary to accommodate it. Quite apart from the expense of construction and maintenance, a pavement on this wide roadway has the additional disadvantage of being noisy, of reflecting a burning heat in summer-time and of requiring the attention of the sprinkling cart too often; for it takes but a few moments for the water to dry up on a hot asphalt pavement. Most of all, such a street is not beautiful.

Why not adopt the type of residential street used by older countries who have had greater experience in these matters than we. The accompanying illustration shows a 60-ft. street designed in this approved manner. The roadway, though only 24 feet wide, is wide enough to accommodate all the traffic. Macadam, instead of asphalt, is used for paving it. This is cheaper, cooler, less noisy, requires less sprinkling and is much more satisfactory in every way. On each side it is flanked by a strip of grass ten feet wide, in which a row of shade trees is planted. These shade both the roadway and the sidewalk, which runs on the other side of the grassy strip. A shady street like this throws a restful influence over the tired business man on his return from the day's work. A home upon it is one that will keep

"a bower quiet for us, and a sleep

Full of sweet dreams and health and quiet breathing."—M.J.P.

Quebec Has Serious Forest Fire Danger

The forest fire situation has been unusually serious in the province of Quebec during the last half of April and the first half of May, on account of the spell of hot dry weather following the disappearance of the snow, and preceding the growth of the spring foliage. The situation has, however, been efficiently handled through the system of patrols established by the Forest Protection Branch of the Provincial Department of Lands and Forests. The fire protective measures taken by the railway companies, in accordance with the requirements of the Railway Commission, have also aided very materially in preventing fire damage along railway lines.

Death of a True Pastor

Canada has lost a noted and effective leader among her rural clergy in the untimely death of Rev. Rural Dean A. H. Robertson of Cookshire, Quebec. He was a man of wide culture, wider sympathies and a whole-hearted enthusiasm for the uplifting of the economic, social and religious life of the people that he lived and laboured amongst. Possibly he did more than any other rural minister in Canada to foster the study and encourage the practice of scientific agriculture among the people he served. It is to the type of rural clergymen represented in the late Dean Robertson, that the church of Canada must look for strengthening its hold upon the lives and hearts of the people.

—M.J.P.

Big Things in Hydro Electric Plants

Highest Water Power Head is in Switzerland and Largest Turbine Unit in Brazil

The world's highest-head water-power plant is now nearing completion at Martigny, canton Wallis, Switzerland. The fall utilized is 5,400 feet, and the pipes conveying the water from the head of the fall to the power-house, a distance of three miles, are specially remarkable. The pressure gradually increases with the fall till the lowest part is reached, where the pipe, having to withstand 2,500 pounds per square inch had to be made of special ingot-pressed steel. The turbines, which are of the Pelton type, have a total rating of 15,000 h. p. and it is of interest to note that, with the 5400-foot head, only about 30 cubic feet of water per second will be necessary to develop the full 15,000 h.p. output of the station.

Largest Turbine Units

The two largest impulse turbines built to date, each capable of producing 20,000 h. p., have recently been installed in the Pirahy plant of the Rio de Janeiro Light and Power Co. in Brazil. The wheels operate at a speed of 300 revolutions per minute under a head of 900 feet. These two units are an addition to the Pirahy plant, where six 9000 h.p. units have already been in operation, and will bring up its total capacity to 94,000 h. p.

A close second to this record is found in the White River plant of the Pacific Coast Power Co. of Seattle. In this case, each turbine was designed to develop 18,000 h. p. at 360 revolutions per minute under a 440 foot head. However, in consideration of the lower head and the fact that these turbines can totally carry 20,800 h. p. they must undoubtedly be of greater bulk than the new units of the Rio de Janeiro Co's plant.

Highest Transmission Voltage

With the development of long-distance electric-power transmission, the line voltage has increased steadily in spite of difficulties which increase at the same time. When the first 110,000-volt transmission line was put in operation, a few years ago, many considered that the maximum commercial voltage had been reached. But last year, the first 140,000-volt line was put in operation in the state of Michigan, covering a distance of 125 miles, which was soon increased to 235. The line is in regular service and is reported to be giving entire success. The energy is generated at the Cooke hydro-electric plant on the Au Sable river, which empties into Saginaw bay, and is to be transmitted as far south as Battle Creek.—L.G.D.

Wine-making is getting to be of importance in the Argentine. In the Province of Mendoza alone its value last year was over \$30,000,000.

Turkey Eggs

Being the Account of a Dialogue in a New Brunswick Farm House

The telephone bell rang insistently in the house of a farmer near Hartland, N.B. The farmer reluctantly broke off his conversation with a travelling demonstrator of the Commission of Conservation and went to answer it.

"Yes, yes, I see. Well, I don't know whether I can accommodate you or not. Everybody's after them. What's the least you could do with? They're worth 30 cents each."

"Nine?" "Well, I can let you have that many, but it will be the first of next week before I can promise them. All right."

The farmer turned to the demonstrator in an explanatory way: "They pester the life out of me over those turkey eggs for setting. I have only a few hen turkeys, but I could sell eggs from ten times as many if I only had them."

"Did I understand you to say you got 30 cents a piece for them?"

"Yes, and I can't begin to supply the demand."

"Why not keep more hen turkeys?" suggested the Conservation Commissioner man. "There's money in them at that price."

"I suppose there is," said the farmer, "but we can't be bothered with too many of them."

"But it's worth while bothering with them," said the demonstrator. "A turkey will lay 35 eggs a season, and at 30 cents each that means one bird will bring you \$10.50 a year in eggs alone. That is better than growing grain. When a man discovers a money-maker like that, he should go in for it hard."

"I believe you're right," admitted the farmer. "I'm going to think about raising more turkeys after this."

And when the demonstrator took his departure, the farmer mused softly to himself: "I can see one reason why that fellow is called an expert!"—M. J. P.

TO NEWSPAPERMEN

Conservation recently received a request from a Canadian periodical asking permission to republish extracts from our articles. As stated in several previous issues, Conservation is published for newspapers to clip from. That is why it is printed on only one side of the page. The Commission of Conservation wishes the press of Canada to make free use of anything printed in it and it is a matter of indifference whether credit for the articles is given or not. The cuts we use will be gladly loaned to Canadian newspapers.