Conservation

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Fire Protection Proves Profitable

Railway Companies Save Money by Installing Efficient Systems of Inspection

As the result of a special campaign for improvement, an important saving in the amount of payments for fire losses along its right of way is reported by the Atchison, Topeka & Santa Fe Railway. In 1910, the company had claims for 1,509 fire losses, amounting to $100,605. In 1911, there were 574 fires with claims amounting to $51,000. In 1912, the number of fires had been reduced to 135, and the expenditure for the payment of claims to only $6,000.

In order to secure these results, the efficiency of the spark arresters on locomotives was increased, and a more frequent inspection was provided, to ensure prompt correction of defects. Section gangs, trainmen, and other employees, were also impressed with the necessity of giving prompt attention to the suppression of fires in their incipiency. The co-operation of all employees was also secured in connection with the destruction of inflammable material on the right of way and the plowing of fire guards in cultivated fields.

The experience of the Sante Fe clearly indicates that efficient fire protection along railway lines is good business policy on the part of such companies.—C.L.

AB EQUIS AD ASINOS.

Garbage removal is as yet conducted along up-to-date lines in only a very few Canadian municipalities. In Saranac, N.Y., where a great deal of attention is paid to sanitary matters, it is customary to wrap all garbage of a vegetable or animal nature in newspapers before placing it in the garbage tin. This deprives the flies of their principal source of food and has other obvious advantages in connection with the handling of the refuse.

This method was adopted by a resident of an Eastern Ontario city who had seen it in use at Saranac. To his great disgust the garbage men, when they did come, carefully removed the paper wrappings and threw them carelessly round the yard. It was a sad outcome of an intelligent effort to better conditions.

Municipal Milk Department Would Minimize Mortality

Retailing of Milk by Civic Authorities Offers Many Advantages to Consumers—Dangers of Pollution Reduced Thereby and Economy in Distribution and Treatment Effected.

A chart with the following inscribed upon it was conspicuous in Booth 24 of the Baby Saving Show at Philadelphia:

> It is the duty of the Municipality to see that you get pure, clean and fresh milk.
> It is your duty to see that it is kept pure, clean and fresh.
> Don't buy milk unless you are sure it is clean.
> Milk not kept on ice is unsafe to use.

The foregoing statements are accurate. If we consider the latter statement alone, every consumer of milk in Canada may accept it as a fact that, during the hot summer months, very little of the milk sold in this country is safe to use because there is no attention given to the refrigeration of milk from the time it leaves the dairy farm until it reaches the cold storage plant of the milk vendors. Souring frequently occurs in the express car on the way to the city. This means increased cost to the consumer, who, though he may not appreciate it, is in every case charged with all losses incurred in handling.

If, then, milk not kept on ice is unsafe to use during many months of the year, and if it is the duty of municipal authorities to see that the consumer gets pure, clean, fresh milk, what are we going to do about it? The public will not tolerate a merely destructive policy; the sanitarian must suggest a reasonable and rational substantive course.

Some will suggest that the solution of the problem will be found in an elaborate scheme of inspection of dairies and dairy cattle; others will say that a rigid supervision of all milk delivered, including a straining of samples through cotton disks, laboratory examinations, and periodical examination of dairies will suffice. The former method is costly and has, so far, resulted in guaranteeing only a small percentage of the total amount sold. Almost invariably the result has been to increase the cost to the consumer. The latter method, where in operation, has proved that a better average standard can be assured to the consumer—the town-dweller gets less barnyard manure and less pump water—but it is not good enough, as judged by the standard set by the "Baby-Saving Show."

With a view to securing this desired standard, the suggestion is

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AN UNDESIRABLE SOURCE OF MILK SUPPLY.

Typical example of an unsanitary cow stable. Milk from cows housed in quarters of this kind is sold in almost every Canadian Municipality.

Fish Hatcheries and Fish Food

Available Food Supply Must be Considered

Some people have the idea that all that fishes require is water. Given a pond or lake or stream, all that is necessary is to put in a few thousand eggs or fry and a beneficent Providence will accomplish the rest. But no intelligent farmer would sow seed on soil not containing the plant food necessary to growth and fruition. Similarly, to ensure success in the introduction of fish fry, they must be introduced into waters in which it is known that food of the right kind and in sufficient quantity is present. Of this food, insect life forms, in fresh waters, the preponderating element.

For a number of years the Department of Marine and Fisheries has been carrying on the work of re-stocking and of introducing new species, on a large scale. The fish fry distributed in 1911 consisted (exclusive of salmon) of various species of trout and also of whitefish and pickerel. Altogether 332,278,000 fry of these species were distributed. In view of what we know as to the requirements of fishes in the way of food, the question naturally arises whether, in this distribution, the available insect food was sufficient and of the right kind. Are we certain that the species of trout placed in a certain lake would find the right kind of food there and sufficient quantity of that food?

If the farmer, wishing to sow his seed, finds the soil poor in nitrogen or some other necessary plant food, what does he do? Everyone knows he sows a crop such as clover, that will give the soil the necessary nitrogen, or, by many of the known fertilizers he supplies the deficiency, whatever it may be. In fresh-water fishery work, the same methods should be followed. Associated with the fish hatchery there should be, if it is found necessary ,an insect hatchery. When in fishery work, a stage of advancement equivalent to the present stage of advancement in agriculture is reached, we shall have the cultivation of the food of fishes carried on in conjunction with the hatching and introduction of the fry.—*Selected from an address by Dr. C. Gordon Hewitt, printed in the Fourth Annuel Report of the Commission of Conservation.*

Reserve Extension in Northern Ontario Needed

Large Area of Land is Only Suited for Forest Growth

A brief preliminary reconnaissance of a portion of Western Ontario was made last summer for the Commission of Conservation by Mr. J. H. White of the Faculty of Forestry at Toronto. This examination shows that a very large percentage of Ontario west of Sudbury and south of the Height-of-Land is absolutely non-agricultural and is valuable only for the production of timber. Fires have done enormous damage, especially during the period of railway construction. However, a great deal of valuable young growth has come in and requires protection in order that it may reach maturity. Some merchantable timber remains in the area back from the railways, which has not yet been included in forest reserves or in timber limits.

Ultimately, the whole territory south of the 'Clay Belt,' lying between the Timagami and Nipigon reserves, should be included in permanent forest reserves and protected and administered under forestry principles. This section will unquestionably prove a source of large revenue to the Province in the future.—C.L.

ELECTRIC COOKING

In warm weather the housewife likes to reduce to a minimum the heat generated in cooking. The gas stove has won its way into favour because it partly meets this requirement. The flame can be turned on and off at will; it needs to be used when, and only when, cooking is actually going on.

Gas, however, has the disadvantage of an odour, and consumes the oxygen of the atmosphere. Electricity overcomes these defects, and, further, a larger percentage of the heat generated is used, so that less escapes to raise the temperature of the room. As to expense, recent tests show that, at 5c per kilowatt hour, the cost varies, roughly from 3 to 10 cents per person per day. The cost of cooking some typical meals was: —breakfast: oatmeal and coffee, 2¾c; lunch: potatoes, finnan haddie, tea, 3¼c; dinner: beef stew, carrots, potatoes, prunes, 12½c. These rates would not seem to be prohibitive, and nothing cleaner or more convenient than an electric cooker can be found.

It is estimated that at least a tenth of the total agricultural products of the United States is annually destroyed by injurious insects. It is estimated that $300,000,000 is a conservative approximation of the less sustained each year.

Municipal Milk Department

(Continued from page 1.)

made that municipalities should alone control the purchase and distribution of milk, thereby removing the chief dangers, to overcome which requires to-day a body of sanitary police officials, whose annual upkeep materially adds to the price paid by the consumer. Towns and cities should deal with this problem somewhat as they do with the water supply, by taking it into their own hands, the only difference being that they would not own the dairy herds nor the dairies, as they do the water reservoirs. An urban municipality could establish a Milk Department and, for this, would require one or more depots situated within its boundaries, equipped with all the apparatus necessary for refrigeration, pasteurization, bottling, and sterilization of containers of all kinds, also for modification of milk for infants. In addition to this all containers and vehicles for collection, transportation and distribution would be owned and controlled by the municipality, thus disposing at once of many of the difficult points where deterioration at present occurs. As to purchase, the Milk Department would have the most powerful "veto power" over impure milk that it would be possible to conceive. Purchase would be made only from those dairies approved of by its officers and milk, found to be below the standard fixed when tested at the depot, could be refused.

A Municipal Milk Department as outlined would mean that excessive middleman's profits would be eliminated, and the public would be assured that all the people, both rich and poor, were getting milk that was clean, pure and fresh, at the minimum cost. Such a scheme is not now in operation, but it is as feasible and practicable as many other civic health projects which are now being carried on by municipal authorities, and which before they were initiated seemed to possess greater difficulties than does this one. Certainly none were of greater moment to the manhood and womanhood of the next generation.—C.A.H.

WOULD YOU LIKE TO DRINK THE MILK?

The water from this farm well is liable to contamination from the stagnant pool of manure water in the foreground which drains down from the adjacent barnyard. The cows drink the water from this well and the milk cans are washed in it.

PASTURING HOGS

Alfalfa as an Aid in the Economical Production of Pork—Unsanitary Methods of Feeding

Of the many forage plants, alfalfa is one of the most satisfactory for hogs, since it can be made a permanent pasture and is rich in protein, making an excellent combination with corn or other grain. The leaves are tender and the stem small, which make it easily masticated and it is very much relished. At Indian Head, on the farm of Mr. W. D. Lang, one of the farmers who is doing illustration work for the Commission of Conservation in Saskatchewan, some interesting results have been obtained. On less than one acre of alfalfa 55 hogs were pastured during the summer of 1912 for varying periods, 25 hogs, several sows and one boar being pastured for four months, while the others were on for a shorter time. While on the pasture the only grain fed was one-half ton of shorts mixed thinly with water. About 500 bushels of barley and a little oats were fed in finishing and fitting the hogs for market in the fall and early winter. A little over $650 worth of pork was produced at a total cost of not over $300. Mr. Lang considered that by feeding it to hogs he received at least $1.00 per bushel for his barley. Besides the economical production of the pork, the maintenance of soil fertility by feeding the grain on the farm is a distinct advantage.

In Contradistinction

Compare this foregoing excellent 'sanitary' and natural method of raising "the pork we eat" with that recently mentioned in the public press as recommended by a M. O. H. of a Canadian city, viz., the establishment of a municipal piggery, where hogs will be fed on refuse, often in a state of decomposition, and where the hogs thus fattened will be slaughtered for human food.

It is just such methods as those suggested by the sanitary officer which lead the public to believe that the hog is an unclean animal. Certainly if our modern methods of the disposal of house refuse are to be continued along the lines suggested by this sanitary officer, then our appreciation of the hog and of the pork must be affected by a feeling of disgust. If the farmer is wise, and the importance of encouraging the raising of hogs along the lines of the up-to-date Western farmer is realized by the public, then the day is not far distant when the farm fed hog will be the only one that can be killed and sold as Canadian pork. From the sanitary standpoint of pure healthy food, the feeding of hogs in municipal piggeries should be discouraged, and municipal health authorities should be required to devise some more sanitary method for the disposal of town refuse.—C.A.H. and F.C.N.

Passenger Pigeon Is Now Nearly Extinct

Reckless Slaughter Has Exterminated a Once Abundant Bird

Only one passenger pigeon is believed to be now in existence. This is a female in the possession of the Cincinnati Zoological Society. She is the last survivor of a doomed race. Yet within the memory of people now living, huge flocks swarmed in various parts of North America, and at one time they were abundant over almost the entire continent. The sole cause of their extinction is wholesale netting and shooting to supply the markets with game. The last nesting-grounds of any extent were in Michigan, where they grew fewer and fewer in number till about 1898, when they entirely disappeared. Unless our markets are closed to the sale of game, and strict protective measures are enforced, the fate of the passenger pigeon is likely to be shared by the prairie chicken and others of our native game birds.

There are several hundred different kinds of soil in Canada, and the scientific expert in agriculture recognizes the fact that each kind of soil possesses an individuality of its own. What is true of one variety of soil is not true of another, and in a large measure this accounts for many failures in applying the result of experiments along agricultural lines.

PASTURING HOGS

Continued.

Dust from Motors Is Objectionable

Tar, Oil and Other Palliatives May Be Used To Abate The Dust Nuisance

With the return of warm weather, the motor enthusiast brings forth his automobile from the garage, and hies him to the public park to enjoy the delights of speeding. Those who go thither to admire the opening blossoms and to feast their eyes on the fresh green of the shrubs and trees, are often disgusted to find the vegetation wrapped in a pall of grey dust that effectually shrouds its beauty, and that may, indeed, be positively injurious. On city streets and country lanes, pedestrians and horses have their lungs and eyes filled with dust by the frequently passing motors, which, even if they be not the cause of it, are, at all events, the chief agent in its dispersion. Since the automobile has come to stay, the remedy is to improve the roads so that the dust nuisance may be, if not prevented, at least abated. Considerable progress in this direction has been made of recent years.

The ordinary method of watering the streets is unsatisfactory, because water sprinkled on a hot surface in July evaporates almost as quickly as it falls. Other palliative treatments that have been tried are the use of calcium chloride, oil emulsions, and petroleum oils with paraffin base

Dust is, it must be remembered, a necessary bonding material for the stone composing the road, and its scattering by motor traffic is a serious injury to the road itself. Therefore, to meet future requirements, roads must be constructed with a tougher surface that will resist wear and not 'unravel' so easily as roads of the ordinary type. Asphalt and asphaltic oils as binders are being extensively experimented with in the United States, while the use of tar has been adopted as standard practice in England and Scotland. It is essential to success with tar that it should be of uniform quality, and should be refined by heating to drive off volatile oils. Creosote and pitch are often added. The Ottawa Improvement Commission report that the use of a grade of refined tar has been attended with success. Other special materials which may be mentioned are glutrin, which is a bye-product in the manufacture of wood-pulp, and is used for spraying. An emulsified asphaltic oil is used, and another, a liquid compound, when mixed with powdered limestone, produces silicate of lime on exposure to the atmosphere. All these materials are as yet in the experimental stage, but up-to-date and progressive road authorities will not be averse to experimenting with promising materials, for only by practical tests can they discover the kind of road which is specially suited to their local requirements.

Fire Prevention in the Mines

Education Plays An Important Part —Fire Proof Construction of Buildings

Disastrous and destructive mine fires have had their origin in a majority of cases in causes of a trivial nature. Where proper safety regulations are enforced and proper equipment is at hand for fire fighting, such fires might be quickly extinguished if not prevented altogether.

The agencies for fire prevention and fire fighting should, however, be clearly separated, and the first measure necessary in connection with the former is education. Teach the miner and his children the danger of carelessness in using inflammables; point out the perils which lurk in the casual use of non-safety matches, the throwing away of cigarette butts, the careless handling of lighted candle-stumps and lamp-wicks, and the preventible fire might soon become a memory of the past. The second measure in connection with fire prevention embraces the matter of fire-proof construction, and in this connection the stable or the underground engine room should first demand attention. It is economically possible to construct stables which will be to a very large extent fireproof, and the same thing applies to the engine room. Even where it is necessary to lay wooden floors in the stable stalls, these can be so imbedded in concrete as to be rendered practically fire-proof.

In the mine itself fire-proof materials should be used as much as possible. The shaft lining should undoubtedly be of fire-proof construction, and the use of concrete in shafts and main haulage ways opens up a large field for experimental work. Data can be adduced to show that a permanent fire-proof shaft lining is, after a period of fifteen years, cheaper than timber lining. In connection with mine timbers, also, the use of concrete and steel offers advantages over the wood, although concrete has certain disadvantages which sometimes render it unsuitable. The use of steel for this purpose, however, is gradually increasing.

Fire-proof construction in mines will undoubtedly grow rapidly in favour. The increasing strictness of workmen's compensation laws, the awakening of public sentiment, and lastly the increasing relative cost of wooden timbers as compared with steel and concrete, all point to the fact that fire prevention will, in the future, receive more attention than it has in the past.

The fire loss in Canada for the year 1912 amounted approximately to $23,000,000 or a per capita loss of $3.07. To this must be added a per capita cost of maintaining fire brigades, of $1.25, making a total tax of $4.32 per capita. The number of lives lost as a direct consequence of fire amounted to 203 for the same period.

New Light on the Culture of Oysters

Scientific Research Suggests Possibility of Increasing Production

In the life of an oyster a metamorphosis takes place as wonderful as the familiar changes in the history of the butterfly. In the oyster's case, however, the change would appear to be for the worse, for, while the adult is a helpless inert creature, the larva can swim and creep, and possesses many organs lacking in its later life.

There are three important events in an oyster's existence, spawning, swarming and spatting. In Canadian waters the first takes place about the second or third week in July. After fertilization of the eggs, and after passing through the embryonic stages common to all animals, swarming takes place, i.e., the oysters develop into active free-swimming larvae, occurring in large numbers near the surface of the sea. Specimens may be captured by dragging a net made of fine-meshed, silk bolting-cloth behind a boat in the neighbourhood of oyster areas. This larval stage lasts for about three weeks. Towards the end of the period, as the shell grows heavier, the larva sinks more frequently to the bottom, where it moves by a creeping organ known as the foot. Eventually it attaches itself to some solid object, as a rock or shell, by means of a cement secreted by a gland in the foot, which is long enough to reach out and apply the cement to the proper place. The attachment is always on the left side. The spat, as it is now termed, is still very minute, about 1/70 of an inch in length. The swimming apparatus (velum) and the foot, being now no longer needed, disappear. The spat grows rapidly and soon becomes recognizable to the naked eye as a young oyster.

'Spatting' is a process of great importance to the oyster culturist. If he can accurately gauge the time when it will occur, he can render great assistance to the young oyster by putting out shells, stones, brush, glass or other cultch, and thus providing the spat with a clean surface to adhere to. At present, gauging the time of spatting is mere guess-work. If the cultch is put out too soon, it gets slimy; if too late, the time of spatting is over; in either case, the result is a poor set of spat. Perhaps, indeed, the labour and expense of preparing and putting out cultch may represent a total loss. The problem is to find some method of exactly determining for each year and each situation just when spatting will take place.

Prof. Stafford, of McGill University, who has devoted many years of his life to the study of shellfish, claims to have discovered such a method. It is simple in principle, but would require some technical knowledge to apply. All that is necessary is to follow the development of the larva through the swimming stage by making frequent catches with the bolting-net as above described; examination with a microscope will then show when the time of spatting is at hand. The difficulty arises in distinguishing oyster from other similar larvae. It would be necessary for the Government to send round experts to teach the oyster fishermen how to do this with certainty. Tests should first be made to prove the practicability of the method, and, should this be placed beyond all doubt, a microscope may become an indispensable part of the up-to-date oyster culturist's equipment. In this way thousands of dollars would be saved annually, and the culture of oysters be placed on as sure a basis as raising stock or rearing poultry.

An Extension of Western Reserves

Forest Reserve Areas Are Increased by the Addition of 11,000 Square Miles of Territory

By Act of Parliament, near the close of the last session, the area of Dominion Forest Reserves was increased from about 25,000 square miles to nearly 36,000 square miles. This action was taken upon the basis of reports prepared by the Forestry Branch of the Department of the Interior. A large number of field parties had been engaged in securing the necessary data preliminary to this action. During 1911 the Commission of Conservation took an active interest in the establishment of the Rocky Mountains Forest Reserve, and assisted materially in securing the large addition which increased the area of Dominion forest reserves from less than 3,000 square miles to about 25,000 square miles. The new additions, like the original reserve areas, are scattered throughout the forest sections of Manitoba, Saskatchewan and the Railway Belt of British Columbia.

Practically all of this land is reported as being non-agricultural and chiefly valuable for the production of timber. On much of it, fires have caused extensive damage, so that the amount of merchantable saw-timber over considerable areas is relatively small. However, in addition to the saw-timber, which in the aggregate amounts to a good deal, there is a large amount of pulpwood and a vast area of young growth which, if protected from fire, will become of merchantable size. The relative accessibility of a great deal of this timber land to the new settlements in the Prairie provinces makes reservation and protection tremendously important.—C.L.

In Fort William and Port Arthur they conserve daylight. The 'Twin Cities' are geographically in the Central Time belt, but use Eastern Standard, which is one hour earlier.

Costly Sequel to Typhoid Epidemic

To see a man walking homewards hugging a big bottle of water under his arm, or, perchance, drawing it behind him in a child's wagon, is the curious sight that meets the stranger's gaze in a city of Eastern Ontario. When he seeks to learn the reason, he discovers that this is an aftermath of a typhoid epidemic that occurred two years ago. There is plenty of water for household purposes, but drinking water costs 10c a gallon. It is bought and sold like any other beverage. One passes stores where the window-dresser has exercised his art in arranging water-bottles artistically. Advertisements recommending this or that kind of water are displayed upon the bill-boards and on the screens at the moving-picture shows. Hotels and restaurants specify on the menu the variety of water supplied to their patrons.

The situation above described may be interesting, but it should never have arisen. When we reflect on the addition to the already high cost of living, the added expense to which the city must sooner or later be driven to provide a pure water supply, the financial loss it has already suffered in providing medical attendance and hospital accommodation during the epidemic, and, above all, the lives lost and the homes saddened during that outbreak, the importance of jealously guarding a public waterworks system from contamination is borne in upon us. Let other cities take warning, for in no other department of civic government will carelessness or parsimony reap a more sure or more terrible punishment than in that which is concerned with Public Health.

Durability of Ties

The average life of untreated ties as reported by the steam roads is as follows: cedar, nine years; tamarack, eight years; hemlock, seven years; Douglas fir, seven years; jack pine, six years; spruce, six years. As recent statistics bear evidence, cedar is the species principally used, because of its durability, but the supply of cedar is rapidly becoming exhausted. Unless preservative treatment of ties is introduced, the short-lived species will have to be used untreated, which, on account of the necessary frequent renewal, will increase the cost of mileage maintenance. If treated ties were used, which would cost thirty cents extra per tie for creosoting and equipping with tie plates, the inferior species, which are very plentiful and cheap in Canada, could be used with economy. With such a treatment these woods would last at least fifteen years, and if protected from wear would probably last much longer. —*Canadian Forestry Journal.*

A Leak in a Pipe is a Leak in a Pocket Book

Water Waste Raises Rates—Sound Plumbing Necessary

The property owner pays for water waste in two ways. He pays for additions to the plant, such as new watersheds, reservoirs, tunnels, and pumping stations, rendered necessary by the waste, and he pays for the higher operating expenses caused by the increased consumption.

In New York City, for example, thanks to its prodigal water waste, taxpayers must pay $260,000,000 for a new system of supply, and $10,000,000 more for a tunnel to carry it from the reservoirs. When the times comes for the distribution of the new supply, new pipes must be laid in the city streets, for the old pipes will be unable to withstand the pressure. Likewise, new pipes must be laid in the buildings. And the taxpayer will see the cost of the new city mains reflected in his tax bill and will give the plumber more money for putting new pipes in his building.

If New York's water supply had been properly conserved, storage reservoirs, built at a cost of $50,000,000 or $60,000,000, would have furnished a sufficient supply, even though two years passed without a rainfall.

People let their faucets drip, let their pipes leak, and give no heed. They think water is as plentiful as air. They do not know that a drip 1/32 of an inch in diameter, estimated on the meter value of water at $1 per thousand cubic feet, represents in a year the loss of $11.68. In metered property in New York, where owners have called in the services of experts to locate leakage, they have saved from one-sixth to two-thirds of their annual water bill. Hotels, restaurants and apartment houses are especially liable to this waste. The average owner or lessee seldom has the knowledge to enable him to ascertain the one or more causes that produce water waste. He would be making a good investment in engaging a competent individual or firm to inspect his water supply plant regularly, and to make repairs to fixtures or pipes whenever they become necessary.

Concrete Homes in Town and Country

Although the use of concrete for many constructive purposes has been growing in popularity from day to day, there are still many fields in which its utilization has not been exploited to any extent. Perhaps the most noteworthy example among these is the construction of residences. The chief reason for this lies in the fact that the esthetic possibilites of concrete have been hitherto but little realized in Canada, while the decorative advantages of a stucco faced concrete structure have been almost entirely neglected.

When the era of concrete construction first dawned in Canada, it became apparent that, as a building material, it would supersede brick, stone and wood to no inconsiderable extent. Concrete houses became an economic possibility, but the decorative side of the matter was unfortunately almost entirely neglected. Anything more unsightly than the first efforts of Canadian builders along these lines it would be difficult to imagine. As a result of these earlier efforts the material has since been but little utilized for house-building purposes. Apartment houses have, it is true, been built from time to time out of concrete blocks, but only the cheaper forms of city residences have been constructed out of this material.

There are, however, a number of ways by which an artistic result may be attained in dwellings of concrete construction, and the first and foremost of these is by the use of stucco. To the architect, the utilization of this material opens up a field of unlimited esthetic possibilities; while to the home builder the use of concrete and stucco offers an opportunity for the exercise of a very considerable economy as it is claimed that this form of construction, while very durable, is very much cheaper than stone or brick.

It is, however, in the construction of summer homes, both large and small, that the widest use may be found for this material. Stucco lends itself to any decorative effect which depends on the immediate surroundings of a house, for, if it is properly made, it harmonizes well with nature's varied colours. There is no form of residence which appeals more strongly to the eye than a low, gable-roofed, stucco-clad concrete house; a house with white framed casement windows and vine-clad walls; a home nestling among clumps of trees and surrounded by the vivid verdure of summer. Landscape architects in the United States are beginning to realize the scenic qualities of stucco and it is fast growing in popularity as a decorative medium in house construction.

Still another of the numerous methods by which concrete blocks can be given a finished appearance, is that of surfacing them with a sand blast. The surface cement is worn away by the sand; the block is given a polish, and the broken stone, of which it is partly composed, appears; thus giving the block something the appearance of a polished limestone breccia. A glance at any pavement, from which the surface cement has been worn away by the countless footsteps of the hurrying multitude, will serve to convey a very rough idea of the appearance a sand-polished cement block presents. If the mixture has been made with proper care, the block can be given quite an effective-looking surface, and, so far as appearances go, it is infinitely superior to the ordinary concrete block. It's one disadvantage lies in the fact that surfacing by sand renders the block more liable to erosion.

The use of concrete for residences offers many advantages; it is both economical and durable, and houses built of it are cool in summer and warm in winter. When the esthetic possibilities the material offers become more widely appreciated, it is sure to gain in popularity; and the time is at hand when stucco-clad concrete houses will be made use of far more than they are at present, as these materials offer Canadian architects and builders an opportunity which they cannot afford to neglect.—WL.C.

* * *

The highest success is to do some worthy thing that no one ever thought of doing before.

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.

Simple Precautions May Prevent Fires

If Slashings are removed the danger is decreased

If owners of lands adjoining railway lines would remove or destroy at a safe time of the year, the slashings and other unnecessary inflammable material for a distance of 100 feet outside the right-of-way, a very large percentage of the damage from railway fires would be prevented. All reasonable precautions that railway companies can take will not wholly prevent disastrous fires, so long as adjoining lands are allowed to constitute fire-traps, as is now the case with so large a percentage of forest lands along railway lines.

—C.L.