

# Conservation

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## Conservation of Labour

### Water-power has Done Much to Improve Living Conditions

In the *Electrical World* of June 23, 1917, Hugh L. Cooper compares figures establishing a comparison between water-powers and other natural resources which are most enlightening and, owing to the already important part played by hydraulic resources in this country, are of particular interest to us. A recent estimate places the amount of developed water-power in Canada at 1,850,000 h.p. If we apply the comparative figures above mentioned to the latter amount we at once realize what the harnessing of our water-powers has done for the conservation of labour and in producing better living conditions. One thousand tons of bituminous coal require yearly 1.26 men for mining operations, 1.02 men for transportation, and 0.5 men for conversion to electric energy, giving a total of 2.78 men per thousand tons, the latter being equivalent to 125 h.p. per year. To replace the 1,850,000 h.p. at present utilized, therefore, would require 15,000,000 tons of coal per annum, which represents the labours of 41,000 men. Allowing for the small amount of labour required in the water-power plants, it represents a saving of the human effort of some 38,000 working men and permits the employment of 38,000 Canadians in other industries. These diverse conditions would be further emphasized in Canada, as more than half the coal used would be imported. Again, every pound of coal used decreases our stock of that valuable fuel and it must be borne in mind that a seam of coal, once mined, can never be replaced. The foregoing figures show the saving of labour, but there is still another important conservation effected that has directly to do with the cost of food and of many other forms of life. Though the cost of power has been steadily reduced during past years, the average selling price of hydro-electric energy per horse-power-year is about \$10 rather than steam, while the threatened coal shortage may increase this expense materially.

Among other benefits may be mentioned the important electro-chemical and metallurgical centres of Niagara Falls and Shawinigan, the nitrogen fixation industry for fertilizers and explosives, the numerous large pulp and paper mills now established from coast to coast, and the recent introduction on a relatively large scale of electric steel and iron furnaces.—L.G.D.

## Harvesting the First Necessity

### Every Effort Should be Made to Get Labour to the Farm

The extra acreage of beans, corn and potatoes planted in some parts of Canada was put in under difficult conditions as regards labour and in the face of a scarcity of labour for harvesting the crops. The help necessary for harvesting our crops should be organized now. We can live without fashionable clothes, fancy hats, fine boots, frills and shows, but we cannot go long without food. Those employed in handling the less needful things should be employed in producing and helping to save our crops. Thousands of barrels of apples rot upon the trees or upon the ground every year. They should not be allowed to go to waste this year.

## National Forests

### United States Purchasing Large Tracts for Protection of Watersheds

Nearly 1,500,000 acres of non-agricultural forest land has been purchased by the United States Government in the Southern Appalachians and White mountains. The fundamental idea underlying the establishment of these National Forests in the Eastern states is the protection of the watersheds of navigable streams, with a view to the better regulation of their flow. The situation with respect to fire protection has already been greatly improved as a result of the work of the U. S. Forest Service, which is in charge of the selection and administration of these lands. In both east and west, the United States now has a total of 152 National Forests, with an aggregate net area of more than 155,000,000 acres of Government land.

## Waste of Food Stuffs

### Odds and Ends Thrown Away Amount to Vast Amount

Do not waste a slice of bread. There is an old saying, "Many mickles mak' a muckle", and, if there are many individual savings the total gain will be great. Do not be too proud to notice whether anything usable is being wasted; do not be too proud to use odds and ends which might, otherwise, be cast into the garbage can. In Chicago, recently, the garbage was reduced from 400 loads per day to 200 loads a day due largely to the precepts of economy. Economy in the use of food stuffs should be practised by those who live in the country as well as by those who dwell in the towns and cities. Get the real vision of economy and put it into daily practice. Every individual must realize the food shortage in all its magnitude and he must realize what want and famine would mean and then he must put forth every effort to prevent it. Do not leave it to the other fellow. *Do Your Part.* In this matter prevention is a thousand times better than cure. Eliminate all waste in your household.

## Shortage of Wool

### By Saving Rags Canadians Can Help to Avert Serious Shortage

In all the warring countries the demand for wool to supply the world's shortage of wool, is insistent. Canada is no exception, and appeals are being made throughout the country for the savings of rags and old clothes that they may be again used, in the manufacture of shoddy, to relieve the strain upon the wool supply. In Great Britain, the Local Government Board has called attention to the varied means by which this material may be saved, as follows: "On account of the large stocks of clothing needed for the British and allied armies, efforts are being made to save the maximum quantity of rags for use in shoddy mills. The aid of women's societies has been invoked in conjunction with

urban and rural officials. The collection is largely dependent upon the patriotic spirit of the people, but large supplies of old clothes and rags will be called for. Central depots are provided for storage, and when enough rags are on hand for shipment they are forwarded to the district centre, where they are sorted and sold to mill owners, the profits going to the Red Cross or other war charities. An especial appeal is made to the tailors and dressmakers to keep their cuttings for this purpose. Discarded clothing is separated into three classes—all wool, all cotton, and cotton and wool."

This method can be undertaken in Canada by many organizations. Hitherto, owing to our wasteful habits, the saving and collecting of rags has not appealed to us, but the war has brought about many changes, and, it is incumbent upon all Canadians to do their bit toward averting the serious shortages that otherwise are sure to result.

## Fire Prevention at Fall Fairs

The fire chiefs of Canada are alive to the necessity for education of the general public in the enormous number of fires in Canada and the consequent heavy monetary losses therefrom. The fall fairs offer a very favourable opportunity for furthering their educational plan and should be utilized. Exhibits of fire-fighting equipment, short talks on the dangers of careless house-keeping, neglected chimneys, carelessness with lights in barns and sheds, etc., will be helpful. Printed notices bearing the information of Canada's annual total of fire losses, as compared with other countries, and the number of lives lost through carelessness in the use of coal oil, gasoline, etc., would be effective.

To-day the fire chief's reputation depends upon his ability to prevent fires, not on his expertness in extinguishing them after they break out. This result can only be achieved by ceaseless education of the public, by continual and rigid inspection of premises for fire risks and by the enforcement of by-laws providing for the abatement of hazardous conditions.