Chiefly in the Interests of Motorists and Campers

In Motor Rugs There is Wide Choice

Heavy Woollen Rugs to Keep Out the Cold, Light-weight Dusters and Waterproofs; also Ground Sheets for Tourists

Even in July and August there are many days when a rug is more than welcome in a motor, and since 'tis wise to be prepared against all contingencies, the collection of rugs in the Blanket Department should prove extremely interesting.

The prices of the wool rugs are very moderate now when the wool shortage is so very apparent. For instance, there are heavy English woollen rugs in dark plaids and tartans, mostly greens and blues and browns, with on one side fine red, white or gold lines, and fringed on two sides. These are $9.50.

Very good-looking rugs, plain on one side—grey, navy or green, and with dark plaid designs on the other side, are $10.00 each.

A group of heavier rugs in all manner of Scotch tartans and English plaids, also certain plain brown, grey and green rugs, may be seen in soft weaves at prices ranging from $13.50 to $25.00.

Dusters of grey checked material finished with stitched edges are procurable at $5.75.

Very good dust rugs of sand-colored whipcord finished in the same manner are $8.50, and with checked material on one side and whipcord on the other, $12.50.

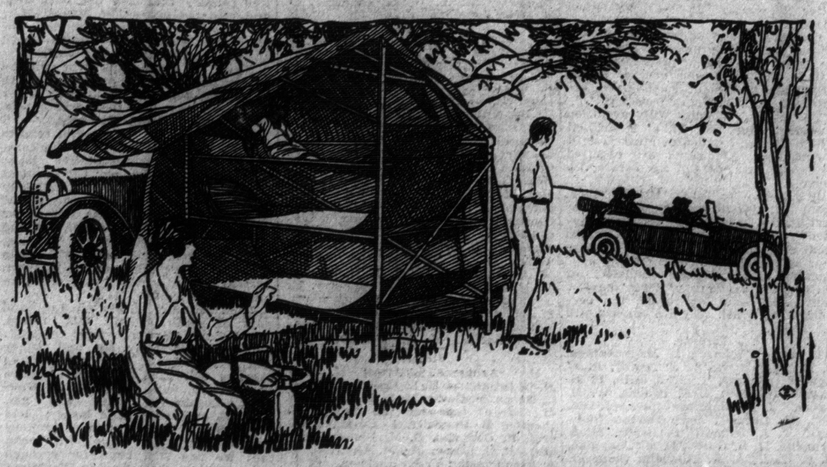
A rug with showerproof checked cloth on one side and a heavy dark green cloth on the other is $14.00.

For campers, or even for the ordinary picnic party, is a most useful waterproof canvas ground sheet, with a brass-bound hole at each corner. Price, $2.50.

—Second Floor, James St.

Planned a Motoring Tour? Then Here is an Eaton-made, Collapsible, Portable Tent That Should Interest You

It Can Be Erected in 15 Minutes, Has a Heavy Khaki Duck Cover, and Folds Into a Bundle About 8 x 8 Inches x 7 Feet, and is Provided With Beds.



AUGUST IS WELL NIGH HERE, and it's hey for the merry green woods and the outdoor life! So, whether the gypsy life by motor attracts you, or whether your plan for a holiday or your work, necessitates a more permanent abiding-place, you'll find this tent worthy of more than passing attention.

The sketch gives you an idea of its appearance, with the curtains turned back to show the three beds arranged ship-fashion, one above the other. These canvas bunks can be easily rolled back to serve as bags for the clothing, or removed altogether, when the entire space under the canopy is available as dining or living room, a mosquito bar netting ensuring freedom from all such troublesome little pests.

The curtains can be dropped and buttoned, transforming it into a storm-proof shelter. Hooks and wall pockets for clothes, and a collapsible table one foot six inches wide and seven feet long, add very much to its comfort and convenience, while the lower berth can be used as a seat. It is very well constructed, too, with strong, collapsible framework of cypress wood and iron, and covering of a heavy khaki duck. A carrier is furnished with each tent, which swings it to the side of your car—a neat-looking bundle—dimensions as above and weight about 100 pounds.

One of its greatest charms in the eyes of the tourist is the speed with which it can be erected and taken down, and the ease with which it is manipulated. No tools or instruments whatever are needed to adjust it perfectly, and it is so built that it can stand anywhere. The price of the tent, complete, is $75.00.

—Fourth Floor, Yonge St.

Travelling Gear for Motorists and Others

Picnic Cases Most Successfully Camouflaged as Suit Cases; an Automobile Trunk, and Endlessly Useful Coat Rail Bags

If a motoring tour is intended, some such pieces of baggage are almost essential, and anyone who feels the lure of the lake shore and flower-decked fields and woodlands, far away from eating-places and all that pertains to them, will find one of these picnic cases the veriest boon.

Covered with black enamelled duck—weatherproof and dust-shedding—they are lined with waterproof material, which can be easily washed, and are provided with brass locks and leather carrying handle, in suitcase style.

A splendid one, with knives, forks, spoons, plates and cups for six people, has a tray containing two sandwich tins and spaces for thermos bottles and food. Below the tray is additional space for table-cloths, etc. This is $22.75.

A smaller one 18 inches in length, with eating utensils for five people, and without sandwich tins, is $9.75.

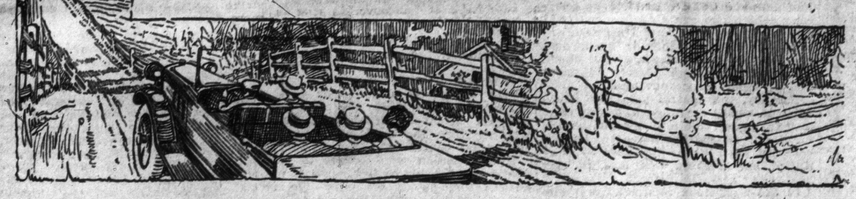
With fittings of much better quality—bone-handled steel knives, etc., is a picnic case for seven people. This is provided with butter and sugar jars, etc., is 24 inches long, the price being $40.00.

A picnic case de luxe—a folding "table restaurant," with fittings for six people, also covered with black enamelled duck, is constructed so that the top opens out as a table, 24 inches square, the bottom unfolds to form legs, and the food and fittings are contained in two drawers. This is very convenient for use in a motor. Price, $45.00.

A very cleverly constructed trunk for the running board, also covered with black enamelled duck, contains two black duck covered drawers, which are provided with separate brass locks, and can be used as small suit-cases, below these being ample space for extra inside tires and motor accessories. The edges are weather-stripped, so that the trunk is dust and weather-proof. Price, $55.00.

Coat rail bags of black enamelled duck, with one most capacious pocket, and two, three or four smaller pockets in the flap, are obtainable in three sizes, each provided with a leather carrying handle, and priced at $10.00 and $11.00.

—Basement.



City and Suburban Orders

If you cannot conveniently come to the Store or telephone, have your orders ready and give them to the drivers or drop them in the boxes situated at the entrances to the Store (8 collections daily), and your orders will receive immediate attention.

THE T. EATON CO LIMITED

GREATER EFFICIENCY IN CANADIAN INDUSTRY

The whole fabric of industry is based on science, and governments are now recognizing it as a duty to embark on a more enlightened policy by promoting scientific research. Accordingly, Canada will soon have a national research institute, which will be located at Ottawa.

Just what is signified by a research institute, and just what is the economic or industrial value of a research institute, will be better perceived by references to some research institutes already in existence. First of all, some account can be given of the National Physical Laboratory of Great Britain, located at Teddington, near London.

Britain's Research Institute.

The National Physical Laboratory of Great Britain is a well-established institution, and has fully demonstrated its value to industry and to the national welfare, this in pre-war years, and very much more so during these present war days. In brief the object of the National Physical Laboratory is to bring scientific knowledge to bear practically on the nation's everyday industries and commercial life.

The foundation of the National Physical Laboratory dates back to the first year in the current century. Its initial staff consisted of three assistant workers. The laboratory was then housed in the Kew Observatory. Today the laboratory has its own buildings at Teddington, is organized into eight different departments and has a staff numbering well over 500 superintendents, scientific assistants and observers, of whom 180 are women.

At this laboratory every sort of scientific problem in its relation to industry or war may be submitted for solution. In addition, the laboratory is the national standardizing and testing institution. As illustrations of the nature of the problems submitted for solution the following may be named:

An investigation into the causes of lubricating properties in oils with a view to framing a specification for such oils.

An investigation into rules for estimating the strength of beams, columns and floors of ferro-concrete, and the designing of apparatus for testing the strength of columns up to 15-20 feet high and of floors of great area.

An investigation into the loss of heat in two structures exactly alike in all parts, but roofed, in the one case, with corrugated iron; and, in the other case, with a preparation of asbestos. The results have relation to the comfort of homes and the cost of heating them.

Supremacy of Aviation

British supremacy in aviation and in the design and construction of airplanes is due very largely to investigations which have been carried on thru several years at the National Physical Laboratory. Every part of a modern airplane, it may be said, is the product of a highly specialized science. In the machine itself, to combine strength with lightness, to select the right material for the right part, to design the wings so that they may bear the greatest weight and offer the least resistance to the motion, to give the body ample strength to withstand the shocks of alighting and yet not weight the machine unduly—all these points and many others have been the subject of long and difficult scientific examination. The engine brought problems of complexity. Here the metallurgist was at work producing alloys little heavier than aluminum yet comparable in strength with steel. Instruments needed by the pilot were investigated. And so the story of the contributions of the scientists at the National Physical Laboratory to the British airplane could continue to be told.

The development of accurate workmanship in all plants turning out shells and other things, calling for extreme accuracy of measurement, necessitates gauges of the utmost reliability. With few exceptions all gauges pass thru the National Physical Laboratory. Accuracy to the point of three-ten-thousandths of an inch is sometimes required. As indicating the proficiency in rapid examination of gauges, it may be said that 10,000 gauges are examined per week.

The Mellon Institute.

Let us now turn to the United States of America, and note the work of the famous Mellon Institute in connection with the University of Pittsburg. This institute was erected by the Brothers Mellon, bankers, to provide manufacturers with the use and facilities of a well-equipped laboratory and trained staff at less cost than the establishment of works laboratories. Any manufacturer requiring a subject investigated can endow a fellowship for one or more years, paying from $500 to $2000, and also the cost of any special apparatus.

Work of the most varied character is done. Recently 42 industrial fellowships were in operation, and their investigations ranged from the coking of coal to the baking of bread, from the washing of clothes to the filling of teeth. The Canadian Government endowed a fellowship to solve the problem of separating asphalt from fine sand that there might be made available for commercial use a certain large deposit in Canada.

Outside the institute proper are a number of small shacks where test-tube results can be carried out on a commercial scale, for it always remains to be proved whether the test-tube discoveries can be applied commercially. In these shacks — unit plants, they have been called—commercial conditions are reproduced on a scale sufficiently large to prove success or failure.

As indicating the commercial results derived from a Mellon Institute investigation, research work for a large bakery in New York City resulted in improvements that are said to have saved the bakery a million dollars a year.

Work in the United States.

Beyond a doubt the industrial and commercial eminence of the United States is linked up with its numerous research laboratories. These laboratories are of three general kinds: (1) those belonging to, and maintained and directed by, the state, (2) those affiliated with universities and technical colleges, and (3) those allied to industrial plants. These types of laboratories are found in all countries where industry and education are well developed. In the United States are The Bureau of Standards at Washington, the Forest Products Laboratory at Madison, Wisconsin, and the laboratory in connection with the department of agriculture. Outstanding university and college laboratories are those of the Universities of Harvard, Columbia, Kansas, Cornell, Pittsburg, Wisconsin, Chicago and Leland Stanford Junior, and the laboratory of the Massachusetts School of Technology. In addition may be named the laboratories in connection with the Carnegie institution and the Smithsonian Institution, and the laboratory of the National Fire Prevention Association of the United States.

The laboratories connected with industrial plants are very numerous, and are often of magnitude, carrying on research work in the realm of pure, as well as of applied science. Prominent among these private or corporate works laboratories are those of the Bell Telephone Company, the Pennsylvania railroad, The General Electric Company, The Eastman Kodak Company, to name no more. These companies or corporations spend large sums on research work—ranging from $25,000 per annum to $500,000, and do this year after year, for the one good reason that it pays them to do so.

Research Work in Canada.

In Canada there are the three types of laboratories—state, collegiate and industrial. State laboratories comprise the Forest Products Laboratory, which works in conjunction with McGill University, the laboratory in connection with the Dominion Department of Agriculture, and the inland revenue laboratory which corresponds with the bureau of standards at Washington, giving its attention mainly to tests and measurements. While all Canadian universities have laboratores, yet perhaps only two profess to have well-equipped and well-staffed laboratories—McGill and Toronto, and these two universities should have their research work and facilities made much more extensive. Ultimately the objective will be to have laboratories of all the chief Canadian universities equipped and staffed to perform their proper function, which is more to train research workers than to do extensive research work, which can be better done in state and works laboratories with their larger equipments and facilities and available funds for the application of scientific discoveries to industrial and commercial ends.

The industrial or works laboratories in Canada—those operated by private or corporate interests—are not very numerous, and are chiefly chemical, nor are they very extensive. As a rule they are connected with chemical and paint firms, electrical and power companies, wood products companies, iron and steel companies, and makers of agricultural implements and fertilizers.

One explanation why Canada has not more and larger works laboratories is that industry in this country has not attained the dimensions that warrant the establishment of extensive private laboratories. It is this situation that has led the Canadian Government to decide to erect at Ottawa a national research institute, which will resemble in its functions and service the national physical laboratory of Great Britain.

Training of Research Workers.

If Canada is to attain a commanding place in the scientific development of her industries she must have trained research workers and an institution where they can possess every facility and advantage for the prosecution of their work, and these men must be given every encouragement and support to continue in their work.

The preparation of these research workers of the future must begin in our secondary schools and their promising students developed there must be encouraged to continue their scientific studies and labors thru the university, and into industry or for industry after graduation. It has been a perception of this necessity that doubtless led the Canadian Industrial Reconstruction Association to consider scholarships for students in both secondary schools and universities.

Since modern industry and the expansion of industry have science as their basis and research work as their means of development, it is of prime necessity that there shall be many ardent and trained students of pure research, the geniuses who go on their way discovering new truths, irrespective of consequences, laying bare more and more of nature's secrets and unravelling her mysteries, with the hope and assurance that some of their discoveries will have application, thru the avenues of industry and commerce, to the welfare of the individual, the nation and of the world at large.

In Canada a new day—a new era—has dawned, and dawned at a time when there is imminent a national industrial regeneration. War has checked the work of scientific research in our universities, but it is good to know that when war is over—perhaps before then—scientific research will be taken up with vigor and with better sustenance than ever before, and that our business men and manufacturers are behind the plans which will establish the national research institute and which will supply this institute with its trained workers.

NEW ZEALAND EXPENDITURE.

A statement issued by the Canadian Defence League yesterday concerning New Zealand inadvertently put their expenditure to the date of a recent royal commission report as $100,000,000, whereas it should have read $200,000,000, for which they have furnished 100,000 men from their population of one million.

TEACHERS ARE TAKING COURSE IN AGRICULTURE

Over 500 school teachers and inspectors are now engaged on the short course in agriculture at the Ontario College at Guelph. According to W. B. Roadhouse, deputy minister of agriculture, this season has been the busiest in its history. The impetus given to agriculture by the war has created a deeper interest in the subject among the teaching profession than ever before.

The crops on the college farm are all in splendid condition and all along the line between Toronto and Guelph the condition of the crops is very gratifying. Corn which had been somewhat slow in growth is now coming on well under the influence of the warm weather.

The first ripe field of barley was cut on Wednesday at Streetsville.

SUPPLY WHOLE CATCH TO HOTEL KITCHEN

Pessimists have said that fishing was dead in Muskoka, but visitors at the Wawa Hotel, Lake of Bays, know that this is not a fact.

Last week, Mr. F. W. Leach, of Toronto, and a party of friends, armed with fishing tackle and bait, paid a flying visit to Hollow Lake, a small lake five miles from the Wawa Hotel, and there made a record catch of mountain lake trout. Isaak Walton, at his best, had nothing on these fishermen.

Arriving at the fishing camp at noon, they unpacked their tackle and started in to business. The following day, at the same hour, they decided it was time to pull in their lines and, like the Arabs, "steal away" back to the hotel, there to show other guests their remarkable catch, for truly remarkable it was—eighty of the finest trout, averaging three pounds each—was the reward these fishermen received for making the trip to little Hollow Lake.

The one hundred and fifty guests at the Wawa were beneficiaries of this trip, and next day at luncheon and breakfast many were the inquiries made as to where the delicious fish came from, and on discovering the donors, a hearty vote of thanks was extended to the fishermen.

ENLARGEMENT GRANTED.

Justice Mulock yesterday granted a week's enlargement in the application made by Peter White, K.C., for the enforcement of the award of $27,500 by the City of Toronto to the Purity Springs Company.

DID NOT REPORT WHEN CALLED FOR

Names of Fifteen Defaulters Made Public by the Authorities.

Names of 15 more men who have been listed by the authorities as Military Service Act defaulters have been released for publication by the department of Major T. P. Grubbe, Toronto military headquarters. The lists contains the names of eight men who are listed as failing to report to the Garrison Regiment in Toronto on June 28 and seven failing to report to the Central Ontario Regiment at Niagara Camp on July 2. The lists are as follows:

Nominal roll of men who failed to report June 28 under M.S.A., 2nd Battalion, Canadian Garrison Regiment, Exhibition Camp, Toronto:

Russell James Anderson, Steamer Parpoonge, Sault Ste. Marie; Charles Boudreault, Jacksonboro; Frank Ormond Cooper, Sudbury; Zenon Deschamplaine, Noelville; Arthur Montgomery, McIntosh Springs; David G. McQueen, R. R. No. 1, Atherley; John George, 76 Berkeley street, Toronto; James Robert Wilson, 25 Grant street, Toronto.

Nominal roll of men who failed to report July 2 under M.S.A. to 1st Depot Battalion, 2nd C.O.R., Niagara-on-the-Lake:

Richard Donson Carmichael, 405 Spruce street, Sudbury; T. Herbert Costello, Costello P.O., New Ontario; Joseph Courtemanche, Elezard Valley; Vital Filion, Farquier; Joseph Guy, Monetville; Ovila St. George, Notre Dame Du Lac; Edward Tirapani, 62 West Bloor street, Toronto.

SPEAKS WELL OF SURGEONS.

Capt. Len Morrison, who returned to Toronto this week, after thrilling experiences as a prisoner of war for a long period in Germany, in telling of the treatment he received at a German civilian hospital, spoke well of the attention he was accorded. The treatment resulted in the successful healing of a compound fracture of the leg. He states that some X-ray pictures he sent home were declared by Toronto surgeons to show remarkable surgical work.