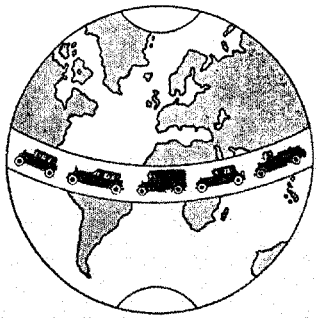
Third World Motor Transport Congress

NEW YORK CITY, U. S. A., JANUARY 10, 11, 1927



SESSION II

HIGHWAYS

Auspices of

NATIONAL AUTOMOBILE CHAMBER OF COMMERCE

366 MADISON AVENUE, NEW YORK CITY, U. S. A.

THIRD WORLD MOTOR TRANSPORT CONGRESS

HOTEL ROOSEVELT
New York City, U. S. A.
January 10-11, 1927

International Progress

Exchange of views on the progress of motor transport throughout the world featured the opening session of the World Motor Transport Congress. More than 450 delegates, representing all the leading nations, were welcomed by Colonel Charles Clifton, President of the National Automobile Chamber of Commerce, and by John N. Willys, Chairman of the Foreign Trade Committee of that organization. Many of the delegates were present at the event for the second or third time and the event had the values of a reunion, continuing the discussion of fundamentals from the point developed during the preceding year.

Commercial Uses

Notable increase in the use of passenger and freight motor vehicles during the past twelve months was reported by all countries. It was particularly noteworthy that there is an increasing appreciation of the possibilities of the automobile on ranches, sugar plantations, by professional men, by building contractors, by suburban home owners and in other fields where its time saving value is a creator of measurable economic service.

Developing Natural Resources

The motor truck is proving a basic necessity in the development of natural resources. In countries which have railroad lines it is extending the range of territory around the rail heads. In other regions it is opening up the country in sections which cannot economically afford railroad construction, but can build roads adequate for truck service.

Enlightened Views

Delegates report that government officials are exhibiting a broader view towards motor transport, recognizing that more highways and lower taxes will ultimately yield a worth-while return to the nation in transportation service.

SESSION II

HIGHWAYS

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SESSION II

HIGHWAYS

ROY D. CHAPIN, *Chairman of Board of Directors, Hudson Motor Car Company and Chairman of N. A. C. C. Highway Committee, Presiding.*

Highway development in Canada, Europe and South America was portrayed in addresses and discussions at this session.

ADDRESSES

MOTOR ROADS OF EUROPE

By THOMAS H. MACDONALD,

Chief, U. S. Bureau of Public Roads

That every country of Europe will experience great increases in the number and use of motor vehicles is more certainly indicated now than was the potential phenomenal growth in this country a dozen years ago. There are however, so many radically different conditions between the United States and these other countries of national characteristics and attitudes, of physical and financial considerations, and of trade relations and existing antipathies, that any direct statistical comparison is impossible. An attempt thus to estimate probable rates of increase would result only in error.

Perhaps the visible evidence would lead to conclusions that stop far short of what is very sure to happen. Perhaps we can now remember with some chagrin that we more or less freely predicted annually as much as ten years ago that the saturation point had been reached in this country. Our general attitude then pretty well expresses about the prevailing thought in most of the continental nations. **Yet in France, for example, the Minister of Public Works reports a 700 per cent increase in automobiles since 1913 when 100,000 cars were in circulation.**

Thus, just as with us, it seems that this utility, this convenient individual transportation fills a human want and extends itself faster than our reluctant imaginations consent. But even so there are important differences and conditions that are very much worth while understanding.

The motor vehicle, particularly the private automobile, is looked upon generally as a luxury. We can easily recall when this was true in this country and at that time taxes and living costs were lower. The huge expenditures and waste of human lives and material resources through war had not then occurred. While there is a very wide variation in the taxes imposed, the rates in most of the continental countries place the motor vehicle in the luxury class. Perhaps the extreme is reached in Vienna, where the internal tax is $21.50 per horse power.

As is generally known, the con-

tinental railways provide three classes of accommodations, at first, second and third class rates. The first class is by our standards relatively high, and the third class very low. There is much travel second class for which the accommodations are good, but the third class with its very low rates appeals to the sense of economy and the purse of a very large proportion of those who wish to travel. Travel by motor vehicle cannot compete in cost with third class fares on the railroads—and the railroads very actively strive for traffic.

Large holdings of forests and parks, once the property of crowned heads, have through revolution and change in government, become public properties where the people may enjoy their outings, and countless thousands do enjoy them within easy walking distances of their homes in the big cities. Almost from the heart of Paris stretches the woods of Bologna.

On the outskirts of many of the larger cities, Stockholm for example, there are extensive acreages set aside for the use of the workmen. Here are hundreds of little almost play houses of one room, scarcely more, but in the summer season covered with flowers and foliage and each tiny farm overflows with garden vegetables carefully tended and growing in profusion. Here the workman and his family spend a healthy and profitable week end within a short distance of his home.

Again, here and there, we find preferential rates established on the tramways at certain hours of the day, established for the workman and presumably enjoyed by most of those who ride back and forth at these hours.

In Germany, Denmark and other countries, walking into the country on holidays and Sundays takes on almost the appearance of an exodus from the cities and towns. Bicycling too claims thousands indulging in recreation or going about their business.

Another condition that is very different and very typcial of so many of these continental countries are the farming villages. In place of our isolated farmhouses surrounded by extensive farm lands, the farm population clusters in villages with the individual small farm holdings extending for some distance on both sides of the village, usually unfenced and without buildings.

These glimpses help to establish our conception of the grooves which through long years have been more deeply cut, more firmly established, and these must have a big bearing upon the utilization of highway transport in continental Europe. Highway conditions, which are a fundamental consideration in highway transport, are themselves very different than those prevailing in this country either now or when our utilization of the motor vehicle first spread to a national scope.

Traffic in Italy

Italy, a relatively small nation in area, of about 120,000 square miles, has a population of nearly 40,000,000. The life of the people clusters thickly in the villages along the lines of highways. Private use encroaches upon the rights of way, already too narrow. Traffic conditions are difficult. Near the population centers there are numerous carts, large and small, pulled by slow-moving oxen, donkeys and less frequently by horses. There are many bicycles and pedestrians, and all of this traffic uses at will either or both sides of the roadways. The number of motor vehicles is as yet not large, 114,700 (1925), or one to 345.8 persons. The maximum rate of automobile traffic reported near the population centers is 3,300 in 15 hours. The Italian Premier, Benito Mussolini, in his final address to the Road Congress, stated: "Italy has a great road problem to solve; new roads necessary to promote her agricultural life, to facilitate her commerce, and finally, arteries necessary for international tourism in order to render her beauties accessible. She possesses, moreover, a conspicuous road patrimony formed during many centuries by the work of countless generations." With a rolling and mountainous topography covering so much of the area, many of the roads follow side hill locations and the surfacing is almost entirely of untreated stone macadam. These roads were planned and well engineered for a traffic that did not include the motor vehicle. Now they are too narrow for the motor vehicle along with the other traffic, and the dust in the dry season is unbearable. The dif-

ficulty of financing new construction and the necessity for adequate highways leading from inland to the lakes, have been largely responsible for the granting by the Government of a franchise to a private company which has built about 52 miles of motor toll road connecting the inland with the lakes, Como, Varese and Maggiore. The toll rate would average for an ordinary car a little under 3 cents per mile. Italy has very capable engineers and they are faced with a tremendously difficult problem of financing the rehabilitation of their road system. This must consist first of all in providing adequate surface over the major part of their whole system.

French and Belgian Highways

France and Belgium have a wonderful heritage in the systematic plan that was laid out and begun prior to, and developed and completed since, the Napoleonic Decree of 1811, so that the layout and classification of the highway systems in these countries on a nationwide basis for uniformity and adequacy of planning are perhaps superior to anything in any like area. The Polytechnic School and the Ecole des Ponts et Chaussees supply the highest ranking engineering graduates for the highway work. In both of these countries there is a considerable mileage of main routes paved with stone blocks, but the surfacing problem on long mileages of stone macadam is now the real problem. The Minister of Public Works reports that of the system of national roads, approximately 25,000 miles in length, more than 90 per cent are rock surfaced roads, and that he has for the maintenance of these roads at the present, about 5,000 francs per kilometer, which at the present exchange rate, is equivalent to approximately $300 per mile. He lists as the roads most urgently in need of repairs, practically all of the main routes leading from Paris to the important cities and ports of France. He also says, however, that, "We are using a judicious propaganda to attract tourists whose expenditures constitute the so-called 'invisible exports' and who each year leave billions in the country. But to get them to come is not the whole of the question; we must also make it possible for them to circulate comfortably and for this must provide for the maintenance of our roads which have been damaged by the war and by the ever-increasing automobile traffic." He also points out that adequate roads are directly profitable and that they have collected for the first 9 months of 1926, 309 million francs or approximately 12¾ millions of dollars.

In Austria and in Czechoslovakia also the surfacing problem on the main roads is of first importance. There are in existence some splendid highways which we are informed date back to the time of Marie Therese. Near Vienna and again near Prague experimental roads are under construction in which both the bituminous mixed types and concrete slabs have been used. These appear to be the first roadways which have been laid in these countries corresponding to the standard types of pavement in general use here. We were informed that following the establishment of a school for technical instruction in France, a school was established in Prague, and whether from this school emanated the standards that were set up for the national road construction is not made clear, but in any event some of the best roads, those more nearly corresponding to the best modern standards in alignment, substantial proportions, width and adequacy, are found near Prague. Where such foundations exist an adequate modern surface will complete roads of the highest class. But the financing will be extremely difficult. The area and supporting population of Austria have both been reduced to only a fraction of their former dimensions, and some method of borrowing must be resorted to if the highways are to be rehabilitated. The Czechoslovakian Government hopes to inaugurate a road program, but must first secure the legislation necessary to provide the revenues. Such legislation will undoubtedly contemplate higher taxation of the motor vehicle in some form. There is no question as to the very active interest in road improvement on a national scale, and an association of motor users and commercial interests has been formed which is projecting the scheme for the building of 10,000 miles of new highways or widening and improving those now existing.

German Methods.

In Germany the road work has been

carried on by the individual States rather than through any central direction, so that the highway service now is on a state rather than a national basis. The Federal Director of Traffic states that the major problem is to provide national routes. An experimental track, similar to that used in the Pittsburg and Arlington tests, has been built by one of the states for testing the relative values of the various types of construction that may be used.

In Great Britain, with an area of 50,000 square miles and a population of 37,000,000 people, the traffic problem has become acute within and between the big cities. The Ministry of Transport has built arterial roads to relieve bottle necks and to establish through lines of communication. Where these have been completed as parts of established routes they are carrying a very heavy traffic and have afforded wonderful relief. This work, however, was taken up at the particular time to assist in providing employment, and a part, at least, did not accord with the views of the Ministry of Transport. Where entirely new roads have been opened, width of roadway, alignment and engineering features show splendid vision in providing for the future. But in order to make them fully effective much more work and further expenditures are necessary and this is the difficult problem.

New By-Pass Roads

New sections of important roads are being built to by-pass the congested narrow streets of villages and towns. A typical illustration of the fact that human nature is very much the same the world over, is the record of the fight made by one of the towns established possibly during the time of William the Conqueror to prevent a by-pass being constructed around the town to take the traffic out of the narrow crooked streets of a very densely populated district. The problem of new bridges over the Thames and opening of new traffic ways in London County present problems of first magnitude which the Ministry of Transport is now courageously attacking. It is difficult for us to realize in this country the obstacles imposed by the tremendous weight attached to personal and property rights in Great Britain. To illustrate: Because in the olden days the City of London collected customs at its gates, farmers having supplies to sell formed the habit of stopping just outside the gate and the people came out from the city to buy. So gradually there was established a market. At Aldgate a hay market was established. As the population settled and as villages grew up all around the City of London, which itself is just one mile square, the hay market still persisted and today one of the main traffic arteries to the docks and warehouses now runs through this old market. On certain days of the week the hay carts are parked from curb to curb leaving only room for passage of the street cars in the center. It is doubtful if any area in this country presents as complex and difficult problems as the London County area in the immediate vicinity of the City of London, many of which emanate from ancient rights, customs and traditions. The country roads are largely of macadam construction, surfaced treated with bitumen. They fit comfortably, if somewhat haphazardly, into the English countryside, and offer most delightful recreational opportunities, but they can not supply the facilities necessary to heavy traffic arteries.

Experimental Roads in Sweden

In Sweden experimental roads of different types have been built near Stockholm and a very active debate is taking place as to the best types of road construction. The existing roads are for the most part narrow and winding with numerous grades. Much of the construction for realigning and widening will be expensive because of the necessity for cutting through and handling so much rock. A limited amount of excellent modern construction has already been laid and the Royal Swedish Automobile Club is actively behind the program of adequate road improvement. Sweden is very rapidly adopting the motor vehicle and it will be a most attractive country for touring.

In Amsterdam, as would be expected, the foundation problem is very important, but high technical skill has been exhibited in the construction of roadways. Some of the best asphalt pavements in Europe are in this city.

Denmark is supplied with an arterial road system with ample right of way and a large mileage of stone

block pavements. There are also experimental stretches of road near Copenhagen and there is a departure from the usual type of such roads in that parallel lanes of different materials have been built and the traffic is divided between the pneumatic, solid rubber and steel tired vehicles, each taking the lane provided for that particular type. One of the notable types of traffic here is the bicycle. In a population of 3,289,183, we are told there are one and one-quarter millions of bicycles, and apparently most of these are on the road at the same time.

DATA ON MOTOR VEHICLE USE, TAXATION AND HIGHWAYS IN EUROPEAN COUNTRIES

UNITS OF MONEY AND MEASURE HAVE BEEN CONVERTED INTO UNITED STATES UNITS. FOR MONEY THE CURRENT RATE OF EXCHANGE WAS USED.

Compiled from a series of reports prepared for the American Delegation to the Fifth International Road Congress by the Commercial Attaches of the Department of Commerce.

WORLD REGISTRATION PER CAPITA

Country	Area Sq. Miles	Population	Motor Vehicles	Persons per Motor Vehicle
United States.....	3,026,789	105,710,620	19,697,832	5.4
Sweden	173,105	6,005,759	78,598	76.4
Denmark	16,604	3,267,831	60,310	54.2
Belgium	11,752	7,465,782	90,905	82.1
France	212,659	39,209,518	721,306	54.4
Italy	119,624	39,659,944	114,700	345.8
Czechoslovakia	54,207	13,613,172	18,130	750.9
Austria	32,369	6,535,759	17,346	376.8
Germany	182,213	59,852,682	259,000	231.1
Great Britain.....	89,041	43,628,637	911,000	47.9
Dantzig	754	386,000	1,482	260.5
Esthonia	16,955	1,110,538	693	1602.5
Finland	132,550	3,435,249	14,100	243.6
Gibraltar	1⅞	20,638	491	42.0
Greece	49,022	5,536,375	9,000	615.1
Hungary	35,911	8,215,888	7,177	1144.7
Latvia	25,000	1,909,700	1,190	1604.7
Lithuania	59,633	2,168,971	546	3972.4
Netherlands	12,587	7,212,739	56,300	128.1
Norway	124,964	2,649,775	25,573	103.6
Poland	149,359	27,192,674	16,000	1699.5
Portugal	35,490	6,032,991	13,484	447.4
Roumania	122,282	17,393,149	13,000	1337.9
Russia	1,882,930	108,216,331	11,402	9490.1
Spain	194,800	21,763,147	76,000	286.3
Switzerland	15,975	3,880,320	38,119	101.8
Yugoslavia	96,134	12,017,323	6,610	1818.1

MOTOR VEHICLE REGISTRATION IN EUROPEAN COUNTRIES

	1924				1925			
	Cars	Trucks	Busses	Total	Cars	Trucks	Busses	Total
Sweden	47,729	14,860	Included with cars	62,589	56,475	18,623	Est. 3,500	78,598
Denmark	45,500	14,000	810	60,310				
Belgium	41,850	29,450	1,000	72,300	52,160	37,745	1,000	90,905
France	352,458	200,895	18,890	572,243				721,306
Italy	65,000	30,000		95,000	75,000	37,000	2,700	114,700
Cz'ch'sl'v'kia	9,750	3,600	390	13,740	13,080	4,600	450	18,130
Austria	9,771	5,115		14,886	11,068	6,278		17,346
Germany	130,000	60,000	2,000	192,000	175,000	80,000	4,000	259,000
Gt. Britain ..	474,000	210,000	94,000	778,000	580,000	232,000	99,000	911,000
Total ..	1,176,058	567,920	117,090	1,861,068*				2,210,985*

*Including the 1924 figures for Denmark the total registration becomes 2,271,295.

EUROPEAN MOTOR TAX RATES

	Annual Registration fee and Internal Tax	Gas Tax	Annual Rubber Tax
Sweden	Internal tax of $.096 per 100 lbs. and in addition the registration fee averages about $53.60.	5½ cents per gal.	18.2 cents per 100 lbs.
Denmark	**Cars** Up to 6 H.P. ..... $1.45 per 100 lbs. 6 to 8 H. P. ..... 1.81 per 100 lbs. 8 to 10 H. P. ..... 2.41 per 100 lbs. 10 to12 H. P. ..... 3.00 per 100 lbs. 12 to 14 H. P. ..... 3.16 per 100 lbs. 14 to 16 H. P. ..... 4.20 per 100 lbs. 16 to 20 H. P. ..... 4.80 per 100 lbs. 20 to 25 H.P. ..... 5.40 per 100 lbs. Over 25 H. P. ..... 6.00 per 100 lbs. **Trucks** Solid tires ..... $3.60 per 100 lbs. Pneumatic tires .. $2.41 per 100 lbs.		
Belgium	$1.65 per H. P. up to 24 H. P. $2.47 per H. P. for each supplementary H. P.	3 cents per gal.	
France	Ranges from $14.40 for 5 H. P. to $79.20 for 30 H. P.		
Italy	Average about $29 per vehicle		
Czechoslovakia ..	**Cars** Up to 30 H. P. 45 cents per H. P. More than 30 H. P. 90 cents per H. P. **Trucks** Less than 1 ton $6.00 per truck. 1—2 tons $ 9.00 per truck. 2—3 tons $12.00 per truck. Over 3 tons $15.00 per truck	Fixed by municipalities but in general are the same as for Prague as given here.	None.	None.

Austria	Vary considerable, ranging from $21.50 per H.P in Vienna to $2.06 per H.P. in Province of Styria. Registration costs about $8.00 and is not annual.	4.5% of sales price.	7% of sales price not annual
Germany	**Cars** 14 H. P.....$160 16 H. P..... 200 18 H. P..... 250 20 H. P..... 296 Trucks and busses pay according to net weight, examples are as follows: 2,200 to 2,640 lbs.....$ 53.00 3,520 to 3,960 lbs..... 80.00 5,740 to 6,170 lbs..... 113.00 7,500 to 7,700 lbs..... 136.00 10,600 to 11,000 lbs..... 178.00	None None	None None
England	For private cars up to 6 H. P. $29.10 and $4.85 for each additional H. P. For trucks the range is from $48.50 to $291.00.		

AMERICAN CARS IMPORTED

	1924	1925	Percentage of American Cars to Total
Sweden	10,000 cars 1,750 trucks 1,500 chassis	13,000 cars 2,550 trucks 1,200 chassis	85
Denmark	470 cars 12 trucks 14,396 unassembled*	1,779 cars 41 trucks Unassembled	80
Belgium	1,820 cars & trucks 13,800 unassembled	1,541 cars & trucks 8,000 Unassembled	trucks 70 cars 40
France		14,847 including assemblies	10
Italy	989	2,627**	Unknown
Czechoslovakia	191	522	15
Austria	Limited to 300	Limited to 300	8 or 9
Germany	6,000	12,000	10
Great Britain			
Total	45,228	46,407	

*An undetermined part did not remain in Denmark.
**Includes tractors which were not included in 1924 figures.

IMPROVED ROADS IN EUROPE

	Miles of Improved Road	General Condition for Motor purposes
Sweden	Not given in report.	Quite favorable
Denmark	4,700 miles, National 23,600 miles, Provincial	Excellent
Belgium	5,200 miles, National 975 miles, Provincial 25 miles, Vicinal 6,200 miles, Total	Good on main roads. Fair to poor on secondary.
France	25,000 miles, National 372,000 miles, Departmental and Vicinal	All passable but some in poor condition
Italy	12,500 miles, National 25,300 miles, Provincial 5,500 miles, Communal	Condition of light traffic roads, generally good. Heavy traffic roads not well maintained
Czechoslovakia	37 miles, National 9 miles, Provincial and Vicinal	Considerable mileage of unimproved roads are passable by auto
Austria	2,500 miles, Federal 1,240 miles, Provincial	Medium to bad condition. About 10% in good condition
Germany	200,000 miles, 60% macadam and rest higher type	Better than European average—250,000 miles including some earth roads suitable for auto traffic

HIGHWAY BUDGETS IN EUROPE

	Highway Budget	Projected Program
Sweden	For Fiscal year 1927-28 $6,164,000 out of road taxes and $2,814,000 additional requested	Main roads to receive first attention. Mileage of program not stated
Denmark	Cared for almost entirely by local authorities and can not be given	No information
Belgium	About $900,000 appropriated for maintenance in 1926	No new construction planned
France	1926 budget was $11,840,000	Already has adequate system and little thought given to extension
Italy	$44,847,007 for 12-year period 1924-1936	———
Czechoslovakia	$2,463,100 for road purposes in 1926	Road improvement on a large scale anticipated
Austria	Not given	Loan of $22,000,000 for highways agitated and would probably have been adopted but for opposition by Vienna
Germany	$135,000,000 to $150,000,000 has been spent yearly for maintenance. Loan of $500,000,000 for reconstruction proposed but not likely to be taken up	Problem largely one of maintenance and reconstruction
Great Britain	Approximately $270,000,000 in 1923	———

COMMENT ON EUROPEAN ROADS

	Comment	Interested Association
Sweden	Roads are narrow and winding with numerous grades. Rocky country makes road building expensive	Royal Swedish Automobile Club, Stockholm, Sweden
Denmark	Existing roads reaching every part of country in good condition	Foreningen af Danske Rutebilejere, Randers, Denmark; Kongelig Dansk Automobil Kulb, Copenhagen; Forenede Danske Motorejere, Copenhagen
Belgium	Great progress made in repairing war damage	Union Routiere; Touring Club; Royal Auto Club
France	Only outstanding new construction is the Route des Alpes	Automobile Club de France; Touring Club de France
Italy	———	Touring Club; Italian Auto Club, Milan, Italy
Czechoslovakia	New legislation proposed to secure highway revenue from motor and other vehicles	
Austria	———	Arbeitsgemeinschaft fuer das Kraftfahrwesen Oesterreichs, Mollardgasse 87, Vienna VI
Germany	Very active interest in roads	Studiengesellschaft

TOTAL EUROPEAN MOTOR TAXES

	Total Annual Taxes Paid by Motor Vehicles	Uses to Which Taxes Put
Sweden	$5,279,600	Exclusively for road construction and maintenance
Denmark	$4,093,200. In addition $2,440,000 from sales tax	All but sales tax goes for roads
Belgium	$1,300,000	Goes into general fund
France	$8,273,000	Goes into general fund
Italy	$3,352,000	A small percentage goes to the commune and province, remainder to general funds
Czechoslovakia	Not available	None goes for roads
Austria	Not available	General funds
England	$15,000,000	Apportioned to thousands
Germany		of local units

RAIL AND MOTOR USE IN EUROPE

	Are Trucks and Busses Used by Railroads?	Do Trucks and Busses Compete with Railroads?
Sweden	In very limited numbers	Furnish supplementary service
Denmark	No	Yes
Belgium	Not in past, but bus operation is being considered	
France	Yes	To some extent
		In general supplementary service only
Italy	Yes	Supplementary service
Czechoslovakia	No	Some supplementary service
Austria	Practically none	Both competitive and supplementary service
Germany	Used as feeders by national railways	No
England		

EUROPEAN IMPORT DUTY ON CARS AND TRUCKS

Sweden	15% ad valorem on cost at port of entry
Denmark	$3.05 per 100 lbs. + 5% ad valorem
Belgium	Vehicles over 8,818 lbs. $3.00 per 100 lbs. Cars 4,409 lbs. to 8,818 lbs. $8.00 per 100 lbs. Trucks 4,409 lbs. to 8,818 lbs. $4.20 per 100 lbs. Cars less than 4,409 lbs. $7.20 per 100 lbs.
France	45% ad valorem
Italy	880 lbs. to 1,990 lbs. $1.80 per 100 lbs. + 35% ad valorem 1,990 lbs. to 35,200 lbs. $1.05 per 100 lbs. + 35% ad valorem Average 65% to 85% ad valorem
Czechoslovakia	45% ad valorem on cost at entry*
Austria	Cars and light trucks 40% ad valorem on cost at entry Heavy trucks $7.30 per 100 lbs. + 20% of value at entry All classes take sales tax of 7% of (invoice + duty
Germany	$19.50 per 100 lbs.; new rate after Jan. 1, 1928 will be $10.80 per 100 lbs. or between 20 and 30% ad valorem
England	33⅓% ad valorem

*On first registration there is charged for passenger vehicles 60c per H. P., up to 20 H. P. $1.50 per H. P. up to 60 H. P., and over 60 H. P. $3.00 per H. P. for trucks and busses 60c per H. P. This charge is made only once and is in effect a sales tax. An actual sales tax of 2% is collected and for cars with more than 4 cylinders or cylinders content of more than 1.95 liter there is a 10% luxury tax.

EUROPEAN IMPORT DUTIES ON GASOLINE PER GALLON

Sweden	Approximately 1-10 of a cent
Denmark	None
Belgium	.08 cent
France	See sales tax—apparently no import tax
Italy	2.6 cents
Czechoslovakia	3.1 cents
Austria	5.3 cents for high grade 3.1 cents for low grade
Germany	4.5 cents
England	

EUROPEAN IMPORT DUTIES ON ACCESSORIES

Sweden	Most items 15%
Denmark	Variable
Belgium	15% ad valorem
France	45% ad valorem
Italy	Depends on kind of metal, etc.
Czechoslovakia	Depends on kind of material, etc.
Austria	Depends on kind of material, etc.
Germany	Variable—not prohibitive
England	33 1-3% ad valorem

IMPORT DUTY ON TIRES

Sweden	$14.60 per 100 lbs. + Government sales tax of $18.30 per 100 lbs.
Denmark	Pneumatic $5.30 per 100 lbs. + 6% ad valorem. Solid $1.46 per 100 lbs. + 6% ad valorem
Belgium	Solid $3.50 per 100 lbs. Pneumatic $3.11 to $4.68 per 100 lbs.
France	No information
Italy	$1.75 per 100 lbs.
Czechoslovakia	$13.60 per 100 lbs.
Austria	$16.30 per 100 lbs.
Germany	$13.40 per 100 lbs.
England	Free

THE CANADIAN HIGHWAY SITUATION

By A. W. CAMPBELL, M.E.I.C.,

Dominion Commissioner of Highways, Canada.

During the last few years road improvement has been carried on with such activity and with such results as to astonish all users of Canadian highways. Our road improvements are of the finest construction of their several types, and a great percentage of the main or heavily travelled roads has been built on the highest model. Locations have been carefully selected, old road allowances widened and roadbeds made of generous and uniform proportions, varying from 24 to 30 feet in width, culverts and bridges have been made to conform in width and all constructed of the most durable and substantial materials. Grades have been reduced to a minimum, curves opened and carefully banked to provide for safe travel with the exercise of reasonable care and caution. The standard width of right-of-way for trunk roads in Canada is 86 feet; standard width of grade—30 feet, and hard surface standard—central 20 feet.

Transcontinental Lines

The improved roads in the eastern provinces of Canada form a connected system from Windsor, Ontario, to Halifax and the Sydneys on the Atlantic coast; and in the western provinces from Winnipeg across the prairie and the Rocky Mountains to the Pacific coast. Very shortly the connection between these two great areas will be completed. At present, by a slight diversion, traffic from the Atlantic to the Pacific coasts, approximately 4,000 miles, is serviceable and uninterrupted.

Connections with U. S. Routes

In eastern Canada, for example, there is one continuous hard surfaced road extending from Windsor-Detroit easterly along the north shores of Lake Erie and Lake Ontario and the St. Lawrence River passing through London, Hamilton, Toronto, Kingston Ottawa, Montreal, and Quebec, thence along the south shore of the St. Lawrence River through the St. John Val

ley, and the north shore of the Bay of Fundy to Halifax and the Sydneys, approximately 1,600 miles, joining United States paved roads at Sault Ste. Marie, Port Huron, Detroit, Buffalo, Niagara Falls, Ogdensburg, Malone, Rouses Point, and lines running south from Montreal and Quebec. Calais-St. Stephen, St. John, Yarmouth, Halifax and Prince Edward Island.

Hard Surface Routes Over Rockies

In the western provinces of Canada a system of main roads is being developed, connecting at the provincial lines, through Manitoba, Saskatchewan, Alberta and British Columbia. Hard surfaced roads of the most substantial type are built over the Rocky Mountains and through the Fraser River Canyon, making through continuous roads joining the prairie with the Pacific Coast, uniting there with the celebrated Pacific Highway extending from Vancouver to Los Angeles. The roadway over the mountain ranges has been carefully laid out by engineers experienced in railway and highway location in such territory. In instances 8 and 10 loops were required to reach the summit. Gradients and widths of roadway are uniform offering but little resistence to traction and all safely protected and guarded on the outer side by protection walls built in the most substantial and durable manner. By branch lines these main roads connect at the international boundary with all principal roads leading into the Western States.

The system of main roads leading out from this trunk line system throughout Canada connects every city and town and reaches into every important agricultural community.

$20,000,000 Federal Aid

On this trunk road system there has been expended about $50,000,000, of which $20,000,000 has been contributed by the Canadian Government in the way of Federal Aid. Approximately $40,000,000 is spent in Canada annually on the improvement and maintenance of roads.

There are about 250,000 miles of travellable roads in Canada; of these about 54,000 miles are gravel and higher type. Approximately 7,000 miles of the highest type have been constructed under the Canada Highways Federal Aid Act.

All Roads Patrolled

All these roads are under a system of patrol, securing that the surface is constantly maintained, hard and smooth, up to the standard of construction. There appears to be no good reason why our roads and streets should not accommodate our traffic without interference or accident, provided suitable uniform regulations are established to govern all users of the highway.

I believe in the motor car as a means of service, recreation and enjoyment; I believe in the consistent improvement and general upkeep of our roads for the accommodation of our people.

100% Increase In Travel In Three Years

In 1922 it is recorded that 514,657 Canadian cars and 996,338 American cars used our Canadian roads. Our records show that last year (1925) three-quarters of a million Canadian cars and nearly two and a half million United States' cars used Canadian roads, an increase of about 100% in three years.

The quick increase in the use of the motor car and the widely growing knowledge of the wonderful attractiveness of Canada's natural scenery, rich possibilities and health-giving climate, the gradual extension of its efficient highway system place beyond us even a reasonable prediction of the vast extent to which this traffic will gradually develop and the tremendous revenue which will be brought to Canada by the constant expansion of its safe and competent maintenance of our highway systems, apart from the very great benefit which these roads will contribute towards the development of our commercial, agricultural and industrial resources and enterprises. This development in transport over our highways has already had the anticipated indirect result of stimulating to a marked degree agricultural production, as well as ordinary trade, in all sections of Canada. We are quite within reason in assuming that this number of cars, which has already grown to such significant dimensions, will rapidly multiply into the millions and we are now taking every step possible to safeguard the improvements which we have made at such costs, and to provide means and devices for the safety and protection of users of the roads.

Uniform Signs Desirable

From the very character of the vehicle, the rapidity with which it travels and the long distances covered by the users, municipal boundaries are not noticed, county boundaries and even provincial boundaries are not observed. Consequently, any signs, signals or symbols should be uniform throughout Canada and, in fact, an exceedingly useful task will be accomplished if these can be made internationally or continentally uniform. The figures just quoted indicate the extent to which the traffic of the two countries is intermingled, and the rapidity with which this exchange is likely to develop.

HIGHWAY DEVELOPMENT IN URUGUAY

By GENERAL EDWARD C. O'BRIEN,

Former U. S. Minister to Uruguay.

Gentlemen:

On September 14, 1926, I had the honor of submitting to their Excellencies the Minister of Public Works and the Minister of Finance, a proposal for the construction of a national auto-carretera between Montevideo and Colonia, to connect Buenos Aires by a rapid service of ferryboats with Colonia.

This project I am now advised has been referred by the National Council to a commission, consisting of Dr. Juan Aguirre y Gonzalez, Dr. Abelardo Vescovi, Ing. Don Bautista Lasgoyti, Ing. Eduardo Garcia de Zuniga and Ing. Don Juan A. Gardone, to report on its advisability at the same time as they have been asked to report upon a similar project with a rapid railway as a substitute for the auto-carretera, and which was presented at a later date and to report to the Minister of Public Works on the respective merits of the two projects.

The necessity for a more efficient communication between the two capital cities is undoubtedly of immediate concern to the people on both sides of the River Plate, and has the support of leading citizens both in private and public life. Indeed it may be said that in the zone through which the railway or auto-carretera would pass, there is nearly a unanimous sentiment in favor of the latter.

It is claimed however, by the partisans of the rapid railway that tourists and vacationists would be attracted in larger numbers by the former from Buenos Aires to the summer recreation playas of Uruguay.

This claim is being heralded with a considerable show of optimism, supported by a studied propaganda, to such an extent as to puzzle many people who have concerned themselves in better communication between the two metropolitan districts, and without taking into account that auto-highways are everywhere regarded as the best means to attract tourists and pleasure seekers to Summer resorts.

Motor Vehicles Popular Conveyances to Playas

It is inconceivable to suppose that the Argentine people in their search for amusement at Summer resorts on the Uruguayan coasts would be willing to pay from $40 to $100, according to weight, for the transportation of their cars from Buenos Aires to Montevideo, while they themselves were travelling by steamboat and railway via Colonia, or that they should be willing to leave their cars in the garages when taking a Summer outing. Moreover it is not to be supposed that people who are not fortunate enough to own motor cars would prefer to travel by a more expensive way, when offered direct and cheaper transportation by steamboat, particularly so when low excursion Summer rates are offered to them. In the case of those who were wishing to travel via Colonia by the railway to some resort in Uruguay they would on their arrival at the railway terminal yet require automobile service to complete their journey.

It is true that people could employ Uruguayan taxicabs and automobiles but a season of only two months would not warrant taxicab companies in Uruguay to incur the expenses of establishment when taking into account the shortness of the season, only for two months, and when for the remaining ten their cars would be without employment.

It must too be borne in mind that the Argentine playas or seaside re-

sorts have their partisans and that the Argentine Government has under construction a fine auto highway between Buenos Aires and Mar del Plata, a distance of more than twice that of from Buenos Aires to Montevideo, and that notwithstanding the fact that there has long existed a rapid and sumptuous railway service between that capital and its most popular pleasure resort.

It is said of the Mar del Plata railway that it compares favorably with similar railways in Europe and North America. It is also to be noted that the Brazilian government has just completed an auto-carretera between Rio de Janeiro and Sao Paulo, paralleling the fine train de luxe which has so long been the pride of the Brazilian people.

Have not the experience and judgment of a people of the neighboring Republics no significance to the promoters of a non-economic railway between Colonia and Montevideo?

Railway of No Economic Value in Production

It would indeed be a strange stretch of imagination that could attribute any advantage to the production of the country from another railroad between Montevideo and Colonia. In this connection it is interesting to know what the present transportation situation in Uruguay is.

There are now 250 railway passenger coaches and 3,725 freight cars, listed in the rolling stock of all the railways of Uruguay. While the latest statistics available show that on January 1st, 1926, there were employed 20,000 automobile passenger cars, 200 auto buses and 3,400 automobile trucks, and the number has been increasing since that date at the rate of 1,000 per month in the first three months and the duties paid on 35,000 cars amount to about $3,500,000.00.

It must be remembered that the owners of these motor cars, who pay every year a million and a half dollars, for licenses, are also obliged, as tax payers, to contribute towards the payment of the annual sum of $700,000 that the State hands over to the foreing Bondholders of the railways by way of guarantees.

Finally it should not be forgotten that the present railway between San Jose and Colonia becomes State property in the year 1962 and we shall be met by the curious fact, if the State should now guarantee a competing railway, that the State would be competing with itself.

The interested citizen has only to look about him to see the innumerable people who are now employing automobiles in nearly all the activities of life. The smiling faces that peer out from the automobile buses and motor cars, the expression of satisfaction that lights up the features of the producer who is delivering his production directly to the consumer, and the enterprising merchants who are transporting their wares direct to customers is a very evident proof of their decided preference of this method of transport and of the superiority of the auto-carretera over a railway service.

The projected routes of both the auto-carretera and the railway are through the best water zone in Uruguay, and who can doubt the advantages of the auto-carretera over the railway in the development of vegetable gardens, dairies and farm production generally. The daily supply of food for the people in Montevideo is a first concern, and must have the first consideration in decision on the method of transportation.

Highways a Boon to Agriculturists

The auto-carretera stimulates production, it unites the rural and metropolitan districts, it enlivens social centres, builds up industrial towns, turns the people from over-crowded populations in cities back to the land. It is a boon to the agricultural colonist, and the value of the land in all zones through which the auto-carretera would pass, is immediately doubled and even trebled.

Briefly, it might be said that with the actual progress of the motor car that, for distances of less than 300 kilometers, to prefer a railway to a motor road would be to turn back the pendulum of the 20th Century and set it to the time of the 19th.

The statement showing the advantages of an auto-carretera over a rapid railway with ferry boat connections with Buenos Aires would not be complete without pointing out another great advantage and convenience the auto-carretera would have over the railway since it would facilitate the transportation of travellers who could arrive on steamships at irregular

hours without reference to the railway time tables.

In concluding I venture the opinion that a railway of such a short haul as that between Montevideo and Colonia could not be considered without sufficient government guarantee, supplemented by possibilities of profits in the participation of construction. Such undertakings sometimes interest capitalists whose aim is speculation and government guarantee, but in no sense should such capitalists be considered as collaborators in the development of the country.

The proposal which I had the honor to submit to the Minister of Public Works and to the Minister of Finance is divided into two projects, one the financing and the constructing of a national auto-carretera and the other, in the case the Government should think it more convenient, the financing and constructing and operating of the same, with its complement and ferryboat service, capable of carrying from 24 to 40 automobiles between Colonia and Buenos Aires. This proposal requires no government guarantee and allows the products of the country to be carried in carretas to pass free of tolls. The Government would have the privilege whenever it chose to expropriate the auto-carretera or ferryboat service.

Address of the Congress are printed in a series of four pamphlets. Each pamphlet is devoted to a session on a particular phase of motor vehicle merchandising, as follows:

1. TRANSPORTATION

All Nations Have Common Interest in Motor Transport—Charles Clifton, President, National Automobile Chamber of Commerce.

Advancing Motor Transport in England—Col. J. Sealy Clarke, former President of Society of Motor Manufacturers and Traders of Great Britain.

Motor Transport and Government—J. Walter Drake, Assistant Secretary of Commerce of the United States.

Letting Motor Transport Help Agriculture, Industry and Commerce—Edward G. Wilmer, President of Dodge Brothers, Inc.

Getting the Best Results from Motor Transport Equipment—Tybor Haltenberger, Representative of Budapest Motor Bus Company.

Motor Vehicles as Vital Units of the Transportation Business—Cyrus McCormick, Jr., Vice-President of International Harvester Company.

2. HIGHWAY LUNCHEON

Observations on European Highway Development—Thomas H. MacDonald, Chief of U. S. Bureau of Public Roads.

The Canadian Highway Situation—A. W. Campbell, M. E. I. C., Dominion Commissioner of Highways.

Highway Development in Uruguay—Gen. Edward C. O'Brien, Former U. S. Minister to Uruguay.

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Distribution Problems in Australia—Harry G. Farr, special overseas representative, Automotive Industries of Australia.

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366 MADISON AVENUE
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Third World Motor Transport Congress

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