

HIGHWAY LEGISLATION IN MINNESOTA

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"Nothing is more typical of a civilization
than its roads."
Hulbert.

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CONTENTS

Introduction

Chapter I. Early Conditions of Travel and Transportation.

Chapter II. Highway Policy of the territory.

Chapter III. State Legislation, 1858-1893.

Chapter IV. The Good-roads Movement.

Chapter V. State Legislation, 1893-1909

Chapter VI. Highway systems and administration in other states and countries.

Chapter VII. Suggestions for future legislation in Minnesota.

Critical Bibliography.

INTRODUCTION

It was Charles Sumner who said, "The road and the schoolmaster are the two most important agents in advancing civilization;" and he spoke well when he said it. Americans, and they are by no means the exception, have been very slow in realizing the full truth and significance of this simple little principle. No doubt, men of the twentieth century would take issue with the words of the statesman just quoted, and not without good reason; but, after all, the elimination of the superlative degree is the only change necessary to make the statement a truism of mathematical accuracy.

The former of these two agents - the road - will be considered in this treatise, chiefly from the point of view of legislation, but, incidentally, also from that of history and of administration; i. e., highways as they have been multiplied and developed by legislation from the organization of the territory in 1849

up to the present time, the conditions and modes of travel and transportation as they have appeared stage by stage in a continuous evolution, and the importance of the road question as an economic and an administrative problem. Highway systems of other states and of European countries will be touched upon briefly, and the good points in each of them will be brought together and offered as suggestive topics for future legislation in Minnesota.

"Highway" will be used here in its broadest sense, as defined in chapter 107, section 5514, Revised Laws of 1905, where part 5 reads, "The word 'highway' shall include roads laid out by state or United States authority, or by any town or county, and all bridges thereon." This, if freely construed, would include, not only the town, county, and other roads of the rural districts, the streets and alleys of incorporated villages and cities, and the bridges on all of these, but also the railroads lying within the state, for they, too, at last analysis, are laid out by the state or the

United States. The larger part of this paper will be devoted to the first of these classes - roads lying outside of incorporated villages and cities, and excluding railroads. The other two groups, and especially the second, will receive only incidental mention.

This thesis is undertaken in a spirit of appreciation of what was so nobly done by the early pioneers, of sympathy for the honest workers who have done their best to facilitate the evolution of the highway, and of a full realization of the infinite importance of the road to commerce in general and its intimate relation with all the phases of rural life - but, over and above all these, in the spirit of an unbiased search for truth and actuality.

CHAPTER I.

Earley conditions of travel and
transportation

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The development of roads, like that of states and institutions, has been by a long and gradual evolution. The animal, with ever-increasing power to overcome the forces of nature and to make innovations, by the force of necessity carried out the simple principle of need and travel and road-making. Man appeared. His needs were greater than those of the beast - ever greater and more complex. So, too, his travels and his roads. The mound-builder of America traveled where land was high, where rivers took their rise. A few remnants of artificial roads built by him have been discovered; but the record of his lines of travel is fragmentary and incomplete. After him came the Indian trotting along his narrow trail, or canoeing leisurely down a shaded stream. - Civilized man came last, with needs unmeasured, but also with resources and ingenuity un-

limited. His it was to span the stream and marsh; to cover the whole continent with a net-work of endless roads; to build lasting ways of sand and of macadam. His task is far from completed; for the beginning was tardy, and the course has been marked by the characteristic waste and corruption of a hurrying civilization.

It is only in regard to comparatively recent history that any absolute certainty exists. Even the period of the mound-builders, so far as it concerns the routes and modes of travel of those interesting people, is only a blank with a few unintelligible scrawls appearing here and there as evidences of a unity once complete.

The large game-animals - the deer, the caribou, the moose, the buffalo - were the pioneer road-makers of this state and the entire West. These animals lived in large aggregations, and, as the food supply gave out or the climate became unfavorable, they moved on to seek new feeding-grounds and richer salt-licks as well as a more favorable climate. It was but natural that

in their movements they searched out the lines of least resistance. These were the divides, great or small as the case might be. Through the forest, or over the plain, the roads which these animals traveled were always highways - more than that, they were highest-ways.- Just here these ignorant roamers of the wilderness followed a principle which bespeaks an intelligence very enviable to the civilization responsible for the wasteful, almost criminal, system of roads which has prevailed in nearly all the states well into the twentieth century - These animals traveled single file and, generally, at a great speed. The result was a narrow, sunken path or trail, winding and curving so profusely that its course could not be seen for a distance greater than twenty feet ahead or behind. - In the pine regions of the North, many of these trails still exist. A day or two spent in winding in and out with one of them gives a person a lasting inspiration and, at the same time, an insight into the conditions of travel a century ago which can hardly be gotten in any other way.

The Indians made use of the roads prepared for them by the migrating game-animals. These, however, were not sufficient to satisfy all the needs of the restless warriors. Their mode of living demanded more extensive communication between family and family, tribe and tribe, than the few scattered roads of the herds could accommodate. They must needs have paths leading to their little garden-fields and to the village. Thus, it came to be the rule that the narrow beast-made trail was used chiefly as a war-path and a strategic hunting route, whereas, for times of peace and for friendly and business intercourse, a new and wider road was laid out. Over this the Indian pony, or quite as often the squaw, dragged the travail, ⁽¹⁾ or Indian carriage, loaded with meat, or wood, or papooses. It was a crude vehicle, but, nevertheless, it served its purpose well. Two poles, about three feet apart, with a few strips of wood forming a platform at one end constituted the whole structure - it was somewhat like a crude home-made cart with-

(1) Hulbert: Historical Highways of America XI., 18.

out any wheels. This made a road almost twice as wide as the ordinary trail.

With the gradual penetration into the West by speculators, missionaries, and traders, a new mode of land transportation came into vogue. The old Indian travail did not appeal to the gentle senses of the white man. Instead of it, the pack-horse system was adopted. But the ordinary Indian and Buffalo trails were too narrow to allow the passage of a bulkily loaded horse. Accordingly, each traveler who passed along widened the path a little - just enough to enable him to force his way through. In this way, by a long and slow process, the primitive trail became the pack-horse route. Short-cuts were frequently taken where the nature of the surroundings permitted it. This was especially the case where the trail crossed a prairie or an open glade. A beginning was usually made in winter when the trail was hard to follow and when a side-track was just as good as the main path. In the spring, the marks which had been made through the snow were followed instead of

the circuitous windings of the original path. This practice resulted in the gradual straightening of the trail, but, at the same time, it often led to poorer roads. It was as a direct consequence of this that the corduroy process was introduced to make possible the crossing of marshes which lay in the way.

The early missionaries who came into the Minnesota regions adopted the mode of travel used by the savages. The waterways were followed wherever that was possible. Two distinct kinds of boats were made use of: The Indian canoe, ten to twenty feet long, of two or three tons burden, and capable of making a daily advance of from eighty to a hundred miles ; the French batteau, some forty feet long and twelve feet wide, with a lading capacity of five tons. ⁽²⁾ Where land travel was necessary, the Indian trails were followed in summer, while in winter a portable road was found in the snow-⁽³⁾ shoe.

The first true road within the territory now included in the state of Minnesota was the Grand Portage

(2) Minn. in Three Centuries-IV, 309, et seq.

(3) Ibid.

corduroy forming a part of the long chain of portages connecting Lake Superior and Hudson's Bay. Thirty-five miles of this cedar-log road lay within the state, about ten miles west of the most extreme eastern part of Cook County. ⁽⁴⁾ It was built by the Hudson's Bay Company in the middle or latter part of the eighteenth century. The route was first discovered by two French explorers, Radisson and Groseilliers, in 1663. ⁽⁵⁾ In 1737, a part of it was fortified. After the beginning of the nineteenth century it formed the chief route for all the trade of that region.

As soon as a part of any western territory came under military occupation, it became necessary for the federal government to make some arrangement for the delivery of the mails. Often, however, when a new post was established, and long before the government could lay out a regular mail-route, the military commanders would provide an irregular and unofficial mail-service between the new fort and the nearest military headquarters. This is what took place in Minnesota. Fort

(4) Ibid, IV, 307, et seq.

(5) Hulbert, VII, 187, et seq.

(6)
Snelling was occupied in 1819. Supplies and mail were brought there by soldiers from Fort Crawford in the southwestern part of Wisconsin. This was not a governmental service and, consequently, was very irregular and uncertain. In summer, boats and canoes were used exclusively; in winter, sledges drawn over the ice by dogs or Canadian ponies. This mode of winter-travel was kept up until 1849. When Zachary Taylor took charge of Fort Crawford, in 1832, a more regular system of mail delivery to Fort Snelling was established. Prior to this time, the mails had been carried only incidentally in connection with the transportation of food and military supplies. After this a regular mail-carrier was employed. He traveled on foot, crossed the larger streams in canoes, and swam the smaller ones. He was able to make the round trip - a distance of four-hundred-twenty miles - in fourteen days. His mail-bag was a water-proof beaver skin. In this he carried, not only the mails, the maximum weight of which was fixed at twenty pounds, but also a blanket, a canteen, seven days' rations of bread and salt, and a rifle. His woolen

(6) Minn. in Three Centuries. IV, ch. 23.

blanket was his only shelter by night. - With the establishment of stage-routes, this primitive method of mail-service was largely superseded by a more modern one; but even today, in some of the northern counties of the state, the oldfashioned carrier still trudges back and forth just as his predecessor did in 1832. (7)

In execution of a resolution passed by the Federal senate, and under the direction of the Department of War, Captain Pope explored the territory of Minnesota and gave a report February 5, 1850. In this report he mentioned three trails connecting the Mississippi with the Red river: one, along the valley of the St. Peter's, striking the Red river near Lake Traverse; one, by way of the Crow Wing and the north bank of Otter Tail Lake, reaching the Red river near the mouth of the Buffalo; one, almost due west from Sauk Rapids. (8) - These were the routes of the Pembina, or Red River Cart, connecting the fur-trade of northwestern Minnesota and Dakota, which had formerly been carried on along the route of the Hudson's Bay Company, directly with the American Fur

(7) Observations in Beltrami Co. 1906.

(8) Pope's report on Minn. - A pamphlet.

(9)
 Company whose headquarters were at Mendota. Norman
 Kittson, one of the distinguished members of the legis-
 lature of 1852, was the inventor of the ingenious vehi-
 cle, the Pembina cart. This he did in 1843. The cart
 was made entirely of wood and leather. It had two
 wheels, carried a load of six hundred pounds, and could
 be constructed at a cost of fifteen dollars. An ox or
 a pony, charged now and then by the whip of the driver,
 furnished the motive power of the vehicle. On the
 journey one man as a rule had charge of a large number
 of carts. This caravan, however, was not the calm and
 silent one of the oriental desert. It possessed that
 characteristic loudness which is the chief ear-mark of
 the occident. Its hideous creaking could be heard for
 miles (10) - a condition which can be partly explained, of
 course, by the fact that axle-grease was as yet a rare
 luxury. - The distance between Pembina and St. Paul -
 about 450 miles - could be traversed in from thirty to
 forty days. (11) Some idea of the extent of the traffic
 carried on over these routes can be gotten by noting

(9) Minn. in Three Centuries - IV., ch. 23.

(10) Ibid.

(11) Ibid.

the number of carts in use each year: (This will also show the growth and decline of the system) - 1843, six carts; 1851, one-hundred-two; 1857, five hundred; 1858, six hundred; 1863, two-hundred-seventy-five; 1867, none. (12)

As better routes were laid out and better vehicles introduced, the Red River cart fast passed out of use.

The first stage-line was laid out in 1849, (13) when Willoughby and Powers began their summer service between St. Paul and St. Anthony, using at first a two-seated open wagon, drawn by two horses, but progressing so far as to be able in the fall to adopt a spring-wagon carrying four passengers and drawn by four horses. Through the winter months the line was not in operation; but the next spring it was again opened and a new route added from St. Paul to Stillwater.

In 1852, Benson and Pattison established competitive lines between the same places. It was as a result of the keen rivalry between these two companies that the first cut rates appeared in Minnesota. The old company had charged seventy-five cents for the trip between St. Paul and St. Anthony. This was very speedily

(12) Ibid.

(13) Minn. Hist. Soc. Col. IX, 18 et seq.

reduced to twenty-five; and finally to ten. - ⁽¹⁴⁾ This same year a hack-line was established from St. Anthony to Monticello, and, a little later, to St. Cloud. In 1854, Willoughby and Powers extended their line to Shakopee and other places. The competition with the Benson-Pattison Company was brought to a close by an agreement between the two companies to divide the traffic - the first, taking the St. Paul-Stillwater line; the second, the St. Paul-St. Anthony line. Before 1855, two other companies had introduced lines: one, from St. Paul to Dubuque; the other, from St. Paul to Superior. Thus, in 1854, eight coaches left St. Paul daily: three for Minneapolis; one for Crow Wing; one for Mankato; one for New Ulm, Faribault, Owatonna; one for Hudson, Wisconsin; one for Stillwater; every other day, one left for Superior. ⁽¹⁵⁾ On the long-distance routes, the chief attention was given to freight, the carrying of passengers being rather incidental. To be sure, a person who wished to journey from one city to another was given the privilege of hanging on as best he could, but he did so always

(14) Ibid.

(15) Ibid.

at his own risk, and the risk was by no means a jocular one in those days of stumps and mud-holes. Anyone who has traveled by wagon through the pioneer section of the state to-day can fully comprehend the dangers involved. (16)

An express route from St. Paul to Galena, Illinois, was established in 1854 by Mr. Burbank serving as the agent of the American Express Company. In summer, the traffic was carried on by boats on the Mississippi; in winter, by stage-route via Stillwater and Prairie du Chien. A flourishing business developed - so extensive, in fact, that this branch line soon became independent and formed the new Northwestern Express Company. (17) It put on a coach service of its own, and, by superior and quicker service, drove the other stage companies out of existence, so that in 1859, after a series of consolidations, it appeared as the Minnesota Stage Company, with an almost absolute monopoly of the whole carrying trade and traveling routes of the territory. (18) At a cost of \$3000, it now constructed a new road to La -

- (16) Experiences in Beltrami Co. 1906.
 (17) Minn. in Three Centuries. IV, ch. 23.
 (18) Ibid.

Crosse, which had by this time secured a railroad. This route lay along the west bank of the Mississippi river - a distance of about 105 miles. By using relay horses every fifteen miles, this could be covered in twenty-four hours. In 1859, also, this company secured the contract for the United States mail-service in Minnesota. About the year 1865, the company had thirteen hundred miles of stage, three hundred additional miles of pony-route, and employed seven hundred horses and two hundred men.⁽¹⁹⁾ But the long-distance stage traffic had already reached its climax and entered upon its period of decline; for in 1862 the first railroad⁽²⁰⁾ had appeared as the herald of a new era in the progress of travel and transportation.

Throughout this stage-coach period both the local and the federal law-makers had been providing for the laying out of territorial and military roads at a rate commensurate with the tremendous increase in the "westward movement." -The first of these territorial roads were laid out in 1849 - one from St. Paul to Mendota,

(19) Ibid.

(20) Minn. Hist. Soc. Col. IX, 27.

another from St. Paul to St. Anthony. From this simple beginning very rapidly developed the complex highway network of to-day.

The chief routes of transportation throughout the early period of the history of Minnesota were the "highways of the Almighty" - the lakes and streams. A canoe commerce prevailed both among the Indians and among the early French fur-traders and explorers. (21)
(22)
In 1823, the first steamboat arrived at Fort Snelling and introduced a system of river transportation which was set aside only by the advent of the railroad about forty-five years later. Before June of 1826, twelve boats had arrived, bringing with them pleasure-parties, settlers, merchandise, military supplies. (23)
During the summer of 1838 occurred the first trip up the St. Croix. As early as 1843, the Otter made irregular journeys from Galena to the ports of the upper Mississippi. These trips were made whenever an amount of freight or a number of passengers sufficient to pay the necessary expenses could be secured, conditions

(21) Ibid - 1 - 18.

(22) Ibid. And Folwell's Minn. 73.

(23) Minn. in Three Centuries - IV, ch. 24.

which were fulfilled only two or three times per month. In 1847-1848, the Minnesota and Galena Packet Company was organized with a regular time-table for all ports along the route between Galena, Fort Snelling, and Stillwater. The next year, a boat laden with Indian goods went from St. Anthony to Crow Wing, towed along by horses somewhat in the manner of a canal-boat. As the trade increased, new companies were formed and the competition grew more keen. A regular boat from St. Anthony to St. Cloud began service in 1850. Extensive explorations and advancements were also made in the Minnesota river this same year. Shakopee had been reached in 1842. After that, each company ascended a little higher than its predecessor had done until, in 1850, Judson, in Blue Earth county, was reached. These exploring trips were for the most undertaken by pleasure-parties, although occasionally they were arranged for the purpose of opening up new trade-routes.

In 1851, about two steamboats arrived at Stillwater every week, loaded largely with immigrants and

lumber. A new source of activity for the steamboat companies appeared in 1854, when two thousand bushels of wheat were shipped out of the state - the first shipment of its kind in the history of Minnesota. - The number of arrivals in St. Paul during the next few years indicates quite clearly the extent to which river-trade had developed in 1855, from Galena 300, from St. Louis and the Ohio 120, from the Minnesota 143; in 1856, from all points 759; in 1857, a total of 965; in 1858, a total of 1090 of which 394 came from the Minnesota. - An interesting attempt was made, in 1859, to go up the Minnesota to its source, pass through Big Stone Lake into Lake Traverse, and thence up the Red river. The undertaking ended with the boat stranded in the shallows of the divide, where it was left to be buried by the drifting sands of many years. - Since 1860, largely on account of the growth of railroads, river-commerce has rapidly dwindled away until today the Diamond Jo line running a weekly boat from St. Paul to St. Louis, and few stray excursion boats, and an

occasional boat from St. Paul to some nearby river port is all that remains of the flourishing commerce of 1858. (24)

Minnesota has the honor of having constructed the first bridge that ever spanned the great "Father of Waters." The Mississippi Bridge Company was chartered March 6, 1852. (25) It was authorized to construct a bridge somewhere between Spirit and Nicollet islands; the rates of toll were defined, as well as the terms of the incorporation of the company. All privileges were to be forfeited unless the work was begun within two and completed in five years. After fifteen years the bridge was to be sold to the County of Hennepin, or to the town of Minneapolis. No other bridge company was chartered before 1854. It seems very likely, therefore, that it is to the bridge built by this company that Mr. Neill refers when he writes: "About the last of January, 1855, the two houses adjourned one day to attend the exercises occasioned by the opening of the first bridge of any kind over the mighty Mississippi

(24) For this whole paragraph: Minnesota in Three Centuries, IV, ch. 24.

(25) Session Laws of Minn. 1852, p. 19.

ever completed, from Lake Itasca to the Gulf of Mexico. It is made of wire, and at the time of its opening, the patent for the land on which the west piers were built had not been issued from the land office." (26)

With the thousands of bridges roofing the streams and marshes of Minnesota today, it requires a decided effort for anyone to realize that only fifty-five years ago, throughout the entire state, there was not one.

Thus, as the need has arisen, the road has developed. An evolution has taken place; is in process still; and will continue for many years to come. The simple buffalo path became the strategic Indian trail. The bridle-path came and went. The cart-way, likewise. The slow post-road gave way to the rapid stage-line. This divided its functions between the railway and the wagon-road. The heavy, clumsy wagon-road is yielding gradually to the hard and polished highway of the motor vehicle. The smoother electric-car way is receiving more and more of the traffic formerly carried by the rippling railroad. The water-ways, too,

formed a stage in the evolution: where there were no trails, the canoe was used; when there were no railroads the steam-boat was used; but they were abandoned because at best they were comparatively clumsy and inconvenient.

A more detailed study of this evolution as it has appeared in Minnesota, the checks and restrictions which have been placed upon it, and the various movements to which it has given rise will form the nucleus of the following chapters.

CHAPTER II.

HIGHWAY POLICY OF THE TERRITORY

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When Minnesota was organized as a territory in the early part of 1849, the whole area included within her borders, from the White Earth and the Missouri on the west and south-west to the St. Croix and the Mississippi on the east, was one vast wilderness. To be sure, the Pembina cart had been creaking on its serpentine way from the Red river to Mendota ever since 1843; in the East, a few post-roads, a fur station, a crude village or two, were crouching close under the shadows of Fort Snelling; but, as a whole, the territory was strange, wild, unknown, and full of barriers and enemies. It is only by taking into account this wilderness feature - this obtrusive environment - which marked the territory at every point that the policy of the early government can be explained and, possibly, justified.

(1)

According to one eminent authority, three elements are essential to the progress of any society: a vast and contiguous domain; abundant resources; rapid and certain communication - these three besides the population itself. Minnesota had the domain; she had the resources - In the words of Governor Ramsey, (2)

"The products of their fields and their manufacturing industry, (the latter an incident of our unrivalled waterpower);..... and besides these, the pineries upon the Mississippi, St. Croix and their tributaries, with the great deposits of copper and iron on Lake Superior, and the abundant fisheries of the western extremity of that lake"- ; she had the population - only a small part of it actually within her borders, but from the East and from the South reinforcements were streaming in at every call; but the ways of communication, where were they? A skilled seer piercing the darkness which shrouds the distant future might have discerned dimly rising outlines of a huge interlacure of ridges alive with the traffic

(1) Dr. W. A. Schaper - Lecture on The Theory of the State.

(2) Message to Legislature - Sept. 4, 1849.

of a great state. But a traveler of that day saw no such vision. Roads, as a true element of progress, were wanting to this pioneer civilization. - "Highways" then became the watch-ory of the territory. A system of roads was an absolute necessity to the mere life of the society, to say nothing of its progress. Wagon-routes must be constructed, and bridges. Ferries must be operated to carry the brave homesteaders over the barrier-streams. With the extension of agriculture and other, industries, railroads had to be built to take care of the growing trade. These were the needs. How should they be satisfied, and by whom? The population was largely a home-seeking one, eking out a bare subsistence from day to day. The government itself was a homesteader. A high rate of taxation was an impossibility. Capital was limited and wanting. The federal government gave some aid, but that was necessarily limited. Under conditions such as these, it came as an almost inevitable consequence that if any extensive improvements were to be made they must come

254

as the result of individual ventures - private undertakings. Single men with considerable capital, or groups of men forming stock companies, speculated in bridges, in plank-roads and turn-pikes, in ferries, and in railroads. The terms of the various charters granted were practically dictated by the stockholders themselves. Some of these were unfortunate, to say the least. But, when the stringent necessity for highways and the frontier conditions of the territory and of its population are taken into account, the action of the government, in granting them can not be coldly condemned without much hesitation, and, perhaps, not at all. They secured the best terms possible under the circumstances. "All laws not merely local in their objects should be framed for the future, as well as the present," said Governor Ramsey in his first message to the legislature of 1849 and, no doubt, the men who made the laws of that and succeeding years followed his advice to the best of their ability. Some

of the corporations which they chartered have caused the state a great deal of embarrassment within the last few years - a situation which the early legislators in all probability did not foresee - The question still remains, however, is not the state farther advanced today, in spite of the objectionable charters that were granted, than it would have been had the introduction of the railroad been postponed for a decade or two?

Highway legislation during the territorial period was directed almost exclusively along three lines: providing for the laying out of territorial roads; granting charters to individuals and corporations for ferry, bridge, turnpike, and rail-road purposes; and memorializing Congress for aid in highway building. Very few laws of general application were passed at this time, partly on account of the premium put upon individual enterprise, in part also on account of the provision made in the Organic Act that "The laws in force in the territory of Wisconsin at the date of the admission of the state of Wisconsin shall continue to be valid and

operative therein, so far as the same be not incompat-
 (3)
 ible with the provisions of this act."

(4)
 In an early law of Wisconsin, republished by
 order of the legislature of Minnesota, in 1851, the
 power of establishing and supervising county roads was
 lodged exclusively in the commissioners of the county.
 (5)
 Upon the petition of twelve resident householders for
 a new road, or the alteration of an old one, the county
 commissioners had to appoint two disinterested residents
 who, together with the surveyor of the county, were
 to form a board of examiners. This board was to inves-
 tigate and make its report to the county board with an
 estimate of the necessary cost. The road could then
 be laid out if the majority of the commissioners so
 ordered, and provided a second petition of twelve house-
 holders had not in the meantime been received praying
 against the laying out of the road in question. In
 case such opposition did arise, it could be overcome
 only by a third petition signed by a majority of the
 householders within one mile of the proposed road.

(3) Sec. 12, Organic Act of Minn., Mar. 3, 1849.

(4) Passed Jan. 15, 1838.

(5) Revised Statutes - Minn. 1851 - p. 112.

Another act, also taken over from the Wisconsin
(6)
code, made provision for the roads within the town-
ship. The Boards of Supervisors were given powers in
their respective towns similar to those of the com-
missioners in the counties. Each district of the town-
ship was to have its own elective road-supervisor to
notify the landholders when they were needed for high-
way work and to keep an account of all taxes paid, ex-
pended, and due. Upon all able-bodied men between the
ages of twenty-one and fifty a poll-tax equal to three
days of work was imposed annually. Besides this,
the county commissioners were authorized to levy an
annual tax on all real estate at a rate not to exceed
one-third of one per cent. This tax could be paid in
money or in labor at the rate of one dollar per day.
Fines were prescribed for the various officers in case
of neglect of duty and for delinquents who failed to
pay their taxes or to appear for work when summoned.
This law, as well as the preceding one, is remarkable
only on account of its close similarity to the acts

(6) Ibid -- p. 78.

under which the road system of Minnesota is still operated.

Such, then, were the first general road laws in force in the territory. The system which they embodied was an old one originated in England, then transferred to the American Colonies, and finally carried step by step westward to the Mississippi valley. ⁽⁷⁾ It was well adopted to a pioneer community where travel was largely local, where capital was scarce and population sparse. Furthermore, it was the only system that had been tried in the United States, and Minnesota, very naturally, feared the uncertainties of an innovator, as Governor Ramsey well said in his first message: ⁽⁸⁾ "Older communities can afford experiments; we are too young, and our infant steps too tottering to justify our seeking to stride through new and difficult paths, which are yet unbroken by the footsteps of older and stronger governments." The fault does not lie with the men of 1849 who adopted this system, but much rather with those of the succeeding years who

(7) Jenks: Pub. Am. Ec. Asso. IV, 21.

(8) House Journal - 1849, p. 7.

failed to modify and develop it to harmonize with the continuously progressing and changing conditions of the state. An excuse is often found in the conservatism of the people and their general aversion to any decrease in the power of the local units; but no community is so conservative, so averse to progress, as to refuse to allow any change whatever. But the change must be a gradual development - a natural evolution. What conservative men object to is the terrace method of reform in which there is a radical and abrupt change every ten or more years after long intervals of inactivity and stagnation.

The first general act on the subject of territorial roads was passed November first, 1849. (9) It contained eight sections and provided in detail the regulations according to which highways should be laid out. Commissioners were to be appointed by the legislature to survey, mark out, and establish all new roads granted by legislative act. These commissioners were allowed one year in which to do their work and to prepare

(9) Laws of Minn. 1849.

a detailed report and a plat of the whole survey. The directions for laying out these roads and making the surveys cover every step down to the most minute point. All expenses involved in the opening of these roads and all damages resulting to individual property were to be paid out of the treasury of the territory; but, when once laid out, the roads were to be maintained by the counties. - A few days before this general act was passed, a special act appointed three commissioners to lay out a road from Rum River, by way of Elk River, Big Lake, Sturgis, Sauk Rapids, Aitkins, Little Falls, and Fort Gaines, to Crow Wing. ⁽¹⁰⁾ This was the first road laid out under the direction of the legislature. Four days later, two other sets of commissioners were appointed to open two separate roads from Point Doug-⁽¹¹⁾ lass to St. Paul. The number of commissioners named in each of these special acts varied from three to six, the usual number being three. They were generally men selected from the villages, or even from the country, along the route of the proposed road - An idea

(10) Oct. 27, 1849.

(11) Oct. 31, 1849.

of the nature of one of these acts can best be given by quoting in full one which may be taken as typical. The law of November first, 1849⁽¹²⁾ serves the purpose admirably.

"An Act to locate a Territorial Road from the town of St. Paul to Little Canada.

"Be it enacted by the Legislative Assembly of the territory of Minnesota, that a territorial road shall be established from the town of St. Paul to Little Canada, in the county of Ramsey, and that James R. Clewett, David Eberts, and Benjamin Jarvis, are hereby appointed commissioners to locate said road, and said commissioners shall meet in the town of St. Paul, on the first Monday in November next, or as soon as practicable thereafter, and proceed to the discharge of the duties herein assigned them.

"Sec. 2. This Act shall take effect from and after its passage."

In 1851, only one of these acts was passed;⁽¹³⁾ one was enacted in 1852;⁽¹⁴⁾ four, in 1853; eight, in 1854.

(12) Laws of Minn. 1849, p. 105

(13) Feb. 3, 1851 - Laws of Minn.- 1851, p. 27.

(14) Mar. 1, 1852 - Laws of Minn. 1852, p. 57.

In 1855, forty sets of commissioners were appointed to lay out as many roads. Thirty-one of these were included in the act of February 27,⁽¹⁵⁾ This idea of grouping several sets of commissioners under one act was a new departure and was probably introduced in order to economize time and space.- The legislature of 1856 adopted the same plan, and, between February 13 and March 1, appointed ninety-five sets of commissioners, giving each one a new road to survey and open. During this year, also, four routes which had been unofficially explored and opened to travel were legalized; and five roads laid out by the Federal Government were made territorial roads.⁽¹⁶⁾ The next year only one road was ordered to be surveyed.⁽¹⁷⁾ Thus, in the nine years of the territory, over 150 roads were surveyed and opened to public traffic. Practically all of these were provided as results of petitions circulated among the land-holders and sent to the legislature for action. This ancient method of securing legislation was the prevailing one during this period.

- (15) Laws of Minn. 1855, p. 49
 (16) Laws of Minn. 1856, p. 152
 (17) Ibid - 1857, p. 318.

November 1, 1849, the St. Paul and St. Anthony Plank Road Company was incorporated. Its capital stock was fixed at \$25,000; each share, at \$25. The rates of toll prescribed were very reasonable, varying from one cent per mile for a vehicle drawn by one animal to four cents per mile for every score of cattle. A plank-road was not a novel venture in American history at this time. As early as 1835, one had been constructed near Toronto, Canada. ⁽¹⁸⁾ Syracuse, N.Y., built the first one in the United States, in 1837. From these beginnings in the East, the custom had rapidly spread westward. - No other company of this kind was chartered in Minnesota before March 4, 1854. At that time, six companies were incorporated with terms similar to those of the St. Anthony Plank Road Company. Certain safeguards, however, were introduced: If the corporation should violate the charter, the legislature might recall all the privileges granted; and unless a certain sum of money was expended within three years and the whole road completed in five years, the

(18) Hulbert XI.

charter would be null and void. In the act incorporating the Target Lake Plank Road and Ferry Company, February 28, 1856, these restrictive clauses were omitted. (20) The toll rates were a little higher, covering a range of from one to five cents per mile. The terms of the Shakopee and Chaska Plank-Road Company, in the same year, differed from the preceding only in that they gave the directors of the Company the power to establish the rates of toll for the first ten years. Two companies were incorporated in 1857. One of them, (21) the La Crescent Gravel and Plank Road Company, chartered by the act of March 7, is worthy of notice in as much as it was the only one of this whole series of companies which actually began the construction of a road. The work was not completed by the company; but, according to a subsequent act of the legislature, the village of La Crescent was authorized to finish it.

The Ferry-acts of this period outnumbered all others. The grants contained in these laws were generally to some individual, although occasionally they

(20) Laws of Minn. 1856, p. 178.

(21) Ibid - 1857, p. 27.

applied to corporations. They generally gave exclusive privileges for a limited number of years, varying from five to fifteen - in one or two instances, to twenty. The grantee was required to give a bond supported by good securities. The rates of ferriage were always stipulated and varied considerably from place to place. The first of these grants was made to Franklin Steel, October 20, 1849, authorizing him to run a ferry across the Mississippi River near the Falls of St. Anthony. ⁽²²⁾ February 19, 1851, a general act was passed giving the Boards of County Commissioners power to grant ferry licenses and to regulate the rates of ferriage. ⁽²³⁾ An annual tax of from five to fifty dollars was to be imposed upon all grantees. This had to be paid in advance into the general treasury of the county and the receipt filed with the Register of Deeds. This act seems to have had very little effect in relieving the legislature: four ferry-grants were made during this same session; twelve, in 1852; eighteen, in 1855; in 1856, forty-three; and thirty-eight, in 1857; besides a large number of minute amendments to

(22) Ibid, 1849 p. 98.

(23) Ibid, 1851, p. 25

former grants.

The ferry was only a convenient temporary arrangement for use until bridges could be constructed. As the cost of erecting a span across a river was very great, such a work at this time could be undertaken only by some instrument of combined capital. And so, even during the territorial period, several stock-companies were incorporated for this purpose. The first of these was the Mississippi Bridge Company of March 6, 1852, ⁽²⁴⁾ with a fifteen-years charter and a condition of forfeiture unless the bridge was begun in two and completed in five years. The rates of toll ranged from ten cents for every foot-passenger to twenty-five cents for each vehicle drawn by two animals. Two bridges companies were chartered in 1854: the Minnesota, ⁽²⁵⁾ and the St. Croix. ⁽²⁶⁾ The bridge to be constructed by the former was to become free at the end of 35 years; that to be built by the latter might be bought at any time by the adjacent counties, at cost plus fifteen per cent. - The legislature of 1856 in-

(24) Ibid, 1852, p. 19
 (25) Ibid, 1854, p. 87
 (26) Ibid, 1854, p. 101

incorporated four companies, all of them limited by time or purchase clauses. ⁽²⁷⁾ Similarly restricted were all ⁽²⁸⁾ of the ten companies chartered in 1857.

A bill to incorporate the Lake Superior and Mississippi River Railroad Company passed the House of Representatives, March 2, 1852, but it failed in the Senate. ⁽²⁹⁾ The next year, however, a similar bill passed successfully through both houses and became a law. This was the first company of its kind to receive a charter in the territory of Minnesota. Between 1853 and 1857, twenty-seven companies were incorporated; and yet, notwithstanding this fact, no road was completed before June 28, 1862, when a line was opened from St. Paul to St. Anthony. ⁽³⁰⁾ With one or two minor exceptions, all of these charters failed to embody any restrictive or ⁽³¹⁾ time-limitation clauses. The companies practically dictated their own terms. Right here is the chief point of difference between the Bridge, Ferry, or Turnpike Company and the Railroad company: both were called into existence by the same circumstances and conditions;

- (27) The Watab Bridge Co., Feb. 18, 1856- p.233.
 The Little Falls Bridge Co., Feb. 18, 1856, p.261
 The St. Cloud Bridge Co., Mar. 1, 1856, p. 192
 The Fort Snelling Bridge Co. Mar. 1, 1856, p. 208.
 The time limitation varied from 15 to 30 years.
 Purchase at cost plus 15%
- (28) Upper Minneapolis Bridge Co. - 1857, p. 270
 Sauk Rapids Bridge Co. - 1857, p. 305

both had the same ultimate purpose; at a critical time, both rendered to the state a common service, differing only in degree, and one which was worthy of a due recognition and a reciprocal grant by the state; but, by their charters, the one was temporary, the other perpetual. The bridge, ferry, and turnpike companies received their rewards in the tolls of fifteen to thirty years, or, if the counties saw fit to buy them out before the charter-limit was up, in a clear profit of fifteen per cent. The Railroad company, to be sure, performed a greater service and was entitled to a proportionately greater reward; for it undertook a more gigantic work, marked with greater risks, and demanding greater combinations of capital. But, at the same time, it received a higher rate of income. All considered, it would have been a fair estimate to have placed the reward of the Railroad company in the tolls of fifty, sixty, or even seventy-five years. The bridge, the railroad, the turnpike - all of these were not private or corporate ventures, in the sense that the manufacturing or mining

- (28 con.) St. Paul and Falls City Bridge Co. - 1857, p. 39
 Minnehaha Bridge Co. - 1857, p. 150
 Elk River Bridge Co. - 1857, p. 196
 Stillwater Bridge Co. - 1857 p. 255
 St. Anthony and North Minneapolis Bridge Co.
 1857, p. 278
 Minnesota River Bridge Co. - 1857, p. 282
 The Zombro River Bridge Co. - 1857 p. 207
- (29) Minn. Hist. Soc. Col. IX, 25.

establishments are.. They were merely instruments, loans, as it were, by means of which a young state, hampered by her financial distress, might still secure means of communication necessary to her development and progress. These companies received their reward, their interest-bearing checks, at the time when their charters were granted giving them certain privileges and rights. When these were fulfilled, the state had paid what she owed, and the structures, erected according to the contract, became the sole property. The ferry, in Minnesota, and the turnpike and plank-road, in the states where they were constructed through private enterprise, have already passed over to the state. Very naturally, the change came first to these; but the railroad, too, will pass in due course of time, as it has long ago in the states of the German Empire.

March 3, 1855, was passed a general act dealing with the subject of road supervisors. It was largely an incorporation of the provisions of the Wisconsin

{ 30 } Ibid - 27

{ 31 } R. Saby: Early R.R. Legislation in Minn.

act of 1838, with an article added which gave to the county commissioners the power of dividing the counties into road-districts each of which had to be entirely within an election precinct. (32) By the Public Roads law of 1857, the powers which had formerly been lodged in the county commissioners were given to a county Board of Road Commissioners, made up of the county surveyor *ex-officio* and two elective members holding for two years. (33) Disputes over damages were now to be finally settled by a jury trial before a justice of the Peace. All expenses and Damages involved in the opening of new roads, or in the alteration of old ones, were to be paid out of the county treasury. This was a long step in advance from the old county commissioner system in that it set aside certain men to devote all their time to road-work. They were yet popularly elected, and very likely far from being specialists in the science of road-making, but they came several

(32) Laws of Minn. 1855, p. 97

(33) Ibid - 1857 - p. 244.

degrees closer to it than did the county commissioners with their varied multiple functions. In fact, the system here introduced for the several counties might well be cited as a crude precedent for the State Highway Commission of today.

From 1848 to 1857, the legislature addressed seventeen different memorials to Congress asking that appropriations be made for certain roads within the territory, and the requests were not made entirely in vain. By an act of July 18, 1850, Congress provided for the construction of four wagon roads in Minnesota extending over a total distance of about 450 miles. An appropriation of \$35,000 was made at the time, but this proved utterly insufficient even for completing a single one of these roads. With an additional sum of \$50,000, appropriated in 1854, it was made possible to finish the road laid out from Point Douglass on the Mississippi, by way of Stillwater and the St. Croix, to the Falls of the St. Louis, near Lake Superior. - Besides these appropriations al-

(34) Ex. Doc., 1st S., 32nd C., Doc. No. 12.

(35) U. S. Statutes at Large - Ch. 23, 1850.

(36) Ibid - Ch. 85, 1854.

(37) Ex. Doc., 1st S., 32nd, C., Doc. No. 12.

ready mentioned, Congress made three others: \$45,000,
 in 1853, ⁽³⁸⁾ \$15,000, in 1855; ⁽³⁹⁾ and \$50,000, in 1856. ⁽⁴⁰⁾

Thus, for the entire territorial period, the aid given by the Federal government to the project of road-building amounted to \$195,000.

This period, then, was one of special acts and individual enterprise - one in which the legislation aimed at immediate results rather than at a systematic and permanent policy. The result was a tremendous increase in the quantity of roads, bridges, ferries - highways - and a corresponding neglect of the quality of each of these.

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- (38) U. S. Statutes at Large, 1853, Ch. 7.
 (39) Ibid - 1855, Ch. 110.
 (40) Ibid - 1856, Ch. 65.

CHAPTER III.

STATE LEGISLATION - 1858-1893

-----oOo-----

By an act of Congress, February 26, 1857, Minnesota emerged from her brief chrysalis stage and flared out into the full-grown imago; in appearance, more beautiful and more attractive; among her kin, more social, more powerful, more respected; in possibilities, more promising and hopeful; but in actual reality very little different from what she was February 25. The members of her first legislature were not men of a new stamp and with an enlarged vision. Not at all. Many of them were the same men and all of them had the same ideas and traditions as those held by the law-makers of the last nine years. So, too, the road policy which the state adopted was not a novel and advanced one. It was simply an old article patched up a little here and there and given out under a new name. As a whole, it was not even progressive. To be sure, the total mileage of roads was greatly increased; toy bridges to entertain the floods were built in large numbers each spring and replaced

regularly every succeeding year; a few ferry licenses were granted each session by acts so framed as to permit one or two minor amendments per year throughout the period of the grant. The whole period was dominated by petty special legislation to a degree almost unexcusable in a civilized community so near the twentieth century. During the twenty-eight legislative sessions included in this period, no less than 500 acts were passed on the subject of highways alone. This does not include laws in regard to railroads; and it should be noted, also, that a very large per cent of the bills introduced fell short of passage. The grand total, therefore, would be at least twice the figure given. Thus, the methods, which were of necessity used in the early years of the territory when the civilization was a frontier one and road-making consisted chiefly in laying out routes and clearing away brush and stumps, were extended and applied to the highways of a state which was developing and progressing at a marvelous rate. The results of such an absurd application might

might have been foretold with certainty - they were inevitable. Waste of time, labor, and money; bad roads; stagnant rural life - these were a few of the poisonous products.

In the "Act Authorizing a State Government" several propositions were offered for acceptance or rejection by the convention. ⁽¹⁾ The fifth of these provided "That five per centum of the net proceeds of sales of all public lands lying within said state, which shall be sold by congress after the admission of said state into the Union, after deducting all the expenses incident to the same, shall be paid to said state for the purpose of making public roads and internal improvements as the legislature shall direct." Article two, section three, of the constitution accepted this proposition and thus established what was later to be designated as the "Internal Improvement Lands Fund." No appropriation was made from this fund for the benefit of rural roads before 1869. In that year \$25,000 were allowed for the construction of four

(1) Sec. 5.

bridges, - one in each of four counties - Anoka, Goodhue, Houston, Brown - and for a state road from Duluth to Vermillion Lake. (2) After this followed other appro-

priations varying in an irregular way from year to year:

1872	-----	26,300.
1874	-----	11,050.
1875		12,500.
1876		800.
1881		8,450.
1883		65,950.
1885		78,999.94
1887		4,600.
1889		35,450.
1891		53,495.
Total		\$302,594.94

A very large percent of this sum was expended in the building of bridges the locations of which were specifically indicated in the various acts. As a rule, three commissioners were named in the various laws to view the bridge when completed and to report to the state auditor who issued his orders on the treasury only after the work had been completed to the satisfaction of the state. Prior to 1885, the appropriation for each bridge was made through a separate act. In 1875, for instance, 31 distinct acts were passed to

(2) Chs. 97, 98, 99, 100, 101, - Gen. L. 1869.

to grant money for the construction of as many bridges. In 1885, however, instead of passing 102 separate acts, the legislature hit upon the plan of including them all as items in one general law. - This amount of \$300,000 represents the sum total of all the aid given by the state during this period for the betterment of one of the most fundamental elements of her existence and growth.

Of the general act providing for township organization, passed August 13, 1858, ⁽³⁾ articles 21 to 24 are devoted to a detailed enumeration of the duties of town-supervisors in laying out and maintaining local roads; of the ways in which damages shall be assessed; of the work and reports required of road-overseers; and of fines for neglect of official duties, for failure to appear for work when duly notified, and for refusing to work the required number of hours. This act, so far as it pertains to road-administration, is rather a retrogression than an advance. It clinches more firmly the old erroneous idea that the qualifications of a road-builder are common to all men and, therefore,

(3)Laws of Minn., 1858, p. 216.

specialists and scientific men are not needed in this field. A severe blow had been given to the faint glimmer of hope that flared up when the territorial legislature of 1857 provided for a county board of road commissioners.

The same legislature also passed an act authorizing county commissioners to establish and regulate ferries. ⁽⁴⁾ This was largely a repetition of the earlier territorial act of the same title, but it proved much more effective. After this date the larger number of new ferries were licensed by the counties, although an occasional one was still chartered by the legislature.-- By chapter 95 of the laws of this session, the power to incorporate and regulate bridge companies was given to the secretary of State. ⁽⁵⁾

No important changes were introduced in the general laws which followed in the sessions immediately succeeding that of 1858. In 1862, the county commissioners were given authority to appropriate money from the county treasury, for road purposes, to an amount

(4) Idem-1858, p. 228

(5) Idem-1858, p.291.

not to exceed \$1000 annually, except upon special per-
(6)
mission from the people. An act of 1863 imposed upon
the township the additional duty of erecting and main-
taining guide-posts to direct the wandering immi-
(7)
grant and the traveler. Town supervisors were empowered
to issue bonds for bridge purposes, in 1867, whenever
two-thirds of the votes of any township should so di-
(8)
rect. A more important act of this same year was that
(9)
which legalized the building of free turnpikes. The
general plan was this: A petition bearing the signatures
of a majority of the legal voters affected by the extra
tax-levy involved must first be directed to the county
commissioners; before any surveying could be done, a
private subscription of at least \$200 per mile had to be
guaranteed; subscriptions could be paid in cash, labor,
or material; an annual tax was then to be levied for
three years, one-third of the total expense being raised
each year; the burden of the tax was to fall upon the
city, or village, where the road began, upon the property
within half-a-mile of the first mile of road, within

- (6)Idem- 1862, p. 138
(7)Idem- 1863, p. 91.
(8)Idem- 1867, p. 58
(9)Idem- 1867, p. 49

one mile of the second, one-and-one-half miles of the third, two miles of the fourth, two-and-one-half miles of the fifth, and three miles of the sixth and remaining part of the road; the work was to be performed by contract let by the commissioners. The turnpike itself was to "be bedded with stone, gravel or such other material as may be found on the line thereof, and faced with broken stone or gravel so as to form an even hard surface, with good and sufficient ditches on each side whenever the same is practicable." Several good features of road-construction appear in this statute, notably the contract method of doing the work, the drainage and thorough preparation of the road-bed, and the hard surface. The fundamental lacks of the plan were expert and scientific supervision and state aid. With these wanting, the machinery for carrying out the plan crude, and the distribution of expenses based on the principle of local benefits, it is not surprising to find that no roads were built under this act.

Chapter 48 of the general laws of 1868 amended the old law, limiting the amount to be appropriated by the county commissioners to \$1000, so as to make it

(10)
 read \$1000 for every \$500,000 of assessed valuation.
 This was of significance only to the larger and wealthier counties. The next year, city and village councils were given powers similar to those of the township-supervisors. (11) By an act of 1870, the establishment of watering places along public highways was encouraged by reductions in the road taxes of any person who should set up a convenient watering trough or furnish a well with a suitable bucket. (12) At that time when markets were far apart and roads were bad, such watering places were not luxuries as they are to-day, but actual necessities.

So far, no provision had been made for laying out county roads extending into more than one county. Such roads had always been surveyed and opened by the territory and, later, by the state. March 4, 1872, an act was passed which provided that, upon the petition of twenty legal voters residing within the counties affected, the district judge should appoint commissioners to lay out the desired road. (13) But, even according to

(10) Gen. L. of Minn. - 1868 - p. 84

(11) Ibid - 1869 - p. 40

(12) Ibid - 1870 - p. 23.

(13) Ibid - 1872 - p. 100

this law, such a road could extend into a second judicial district only six miles and solely for the purpose of terminating in a city or a village. - A law supplementary to this one was enacted in 1873, giving persons aggrieved by the appraisal of damages the right of jury-trial in the regular district courts. (14)

March 8, 1873, all of the leading provisions of the preceding acts as amended from time to time were brought together in a new and comprehensive general act, one clause of which repealed practically all the general acts that had been passed during this period. (15) Nothing entirely new was introduced but old provisions were made more specific and definite. A poll-tax of from one to four days was imposed upon all able-bodied men between the ages of twenty-one and fifty years; road-taxes might be commuted at the rate of \$1.50 per day; all damage suits involving more than \$100 could now be brought to the district court. But these are mere details. The important principles of the road-system remained the same - political jacks-of-all-trades

(14) Ibid - 1873 - p. 190.

(15) Ibid - 1873 - p. 96.

had control instead of scientific experts.

Twenty-five years of experimentation were necessary to teach the legislators of Minnesota that thorough drainage is a prerequisite of a good road. At that rate, how long will it take the supervisors of the towns and the road-overseers of the districts to come to a full realization of the same simple fact? Twice the twenty-five years has not sufficed; nor will twenty-five more, nor fifty, nor a hundred, unless those men make themselves specialists in that line. It is not ability that is lacking; but application, study, mastery. The legislature of 1874 made it possible, so far as legality was concerned, for town supervisors to take the initiative in securing the drainage of the road-bed. (16) The process was somewhat the same as that provided for in laying out roads, except that, instead of waiting for a petition from the voters, the supervisors here gave notice of a general hearing where the pros and cons of the project could be presented.

The expenses, as usual, were to be paid by the

(16) Ibid - 1874 - p. 200.

road districts immediately affected.

There were no very important acts in 1875; but one in regard to bridges across the Minnesota river is of interest. ⁽¹⁷⁾ It provided that any individual, or corporation, might construct a free or toll bridge across the Minnesota provided a suitable draw of eighty feet was arranged, and further that the plan and location of any such bridge was first approved by the governor. Prior to this act, all such bridges across any of the larger streams of the state could be constructed only after a charter or grant had been given by the legislature.

Chapter 273 of the laws of 1885 is significant in that it shows a growing tendency to discriminate between good and bad road-material. ⁽¹⁸⁾ It authorized the county commissioners and the town supervisors to condemn property to the extent of five acres, within two miles of any highway, where such tract of land is largely rock or gravel, and provided for the settlement of damage-suits arising out of such condemnations.

(17) Ibid - 1875 - p. 140.

(18) Ibid - 1885 - p. 336.

In 1891, a small step was taken in the right direction when the county commissioners were given authority to appropriate from the county road-and-bridge fund any sum, not exceeding \$300 for each township, to be expended by the supervisors of the towns. (19) This was the first instance of county aid within the state, and a remote forerunner of state and federal aid.

Notwithstanding all of these general acts providing for the laying out and opening of roads by county and township authorities, 277 special acts were passed during this period for the purpose of surveying new or modifying the course of old roads. The number of these acts per session varied from three to forty-eight up to the year 1885 after which there were none. Almost an equally large number of acts conferring ferry privileges upon individuals, corporations, and cities, were passed - most of them in the first half of the period. The last one came in 1887 when seventeen persons named in the act were granted a charter under which they were authorized to maintain a ferry

(19) Ibid - 1891 - p. 96.

(20)
across the Mississippi at Reads in Wabashaw county.
The general provisions of the act were like those of
the earlier ones already described. One of the ferries
chartered in 1875 is interesting in that it is still
maintained by the same person to whom the original act
(21)
was directed. This ferry is run across the Red
River between St. Vincent and Pembina. (22) Special acts
were passed dealing with a large range of other details
coming under various phases of the general subject of
highways: individuals, cities, and corporations were
authorized to construct bridges; towns, villages, and
counties were given power to issue bonds and levy taxes
for road and bridge purposes; various minute amendments
were made to special acts; the action of towns and coun-
ties in laying out certain roads were legalized; and
former grants were renewed and continued in force.-
Memorials to Congress for appropriations to aid in the
building of roads and bridges ceased almost entirely
with the year 1858. although as late as the ninties
several of them were passed to secure aid to prevent
the Minnesota River from changing its course, to im-

- (20) Sp. L. of Minn. - 1887 - p. 933
(21) Ibid - 1875 - ch. 132
(22) It is owned by Daniel F. Brawley.

prove the Red River, and to connect the Great Lakes with the Mississippi by a system of water-ways.

This long period of four decades, less four years, is remarkable for its static condition - its lack of progress. With the exception of a few urgent improvements and a notable increase in road mileage, the highway system remained the same at the close of this period as it had been far back in 1857. But the conditions and the environment had been totally transformed so that features of the system which at that time were commendable and necessary had now become evil and wasteful. The legislators knew that the plan did not bring good results; the farmers suffered under it every day; the cities felt that something was wrong. The laws were amended at every imaginable point; but all in vain. The whole system was out of harmony with the advanced institutions and the prevailing spirit of the age - it was unscientific. For this reason the whole mass of legislation of these years was futile. It tried to patch up and remedy a system that had been outlined.

It interrupted the natural evolution of one of the main elements of the state. The immediate cause for this sudden abandonment of the rural highways was, of course, the advent of the railroad in the early sixties and its tremendous development during the seventies and eighties. With this larger and more extensive project in view, the government, state as well as federal lost sight of those little avenues of commerce leading straight to the sources of the nation's wealth. The railroad was new and novel and large and the cost of transportation upon it could easily be figured. The rural road was old and common-place and small and no one knew the amount of expense it involved. The result is very simple and evident: the railroad flourished; the rural road decayed.

CHAPTER IV.

THE GOOD ROADS MOVEMENT

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Beginning in the later eighties and increasing at a geometrical ratio through the ninties and into the twentieth century a remarkable movement for the betterment of rural roads swept over the country at a pace little short of revolution. What weakened the evolutionary cable, upon investigation, was now found to be the absence of that little strand which had been detached and rejected a few score years before. To fit it in at this stage and to well it firmly required time and skill and co-operation. "The good roads movement" was the plan adopted - a method based upon the old principle of education first and then legislation.

Early in this period it began to appear to progressive men that the old system of road administration was largely a farce. The roads were not improved; the little work expended upon them every summer could

not possibly go farther than to patch up the ruts and pits caused by the neglects of the previous year. Inexperienced and incompetent men did the work under⁽¹⁾ the supervision of still more ill-adapted overseers.

Thousands of these directors in every state drew a considerable salary over and above their road-tax. The whole affair was a ruthless waste of time, money, and energy, to say nothing of the positive injury often done to the roads. The farmers themselves looked upon the system as a joke. The less sense and ability a man had the more certain was he to be elected road-overseer. The days of road-work were looked upon as holidays in which the men of the district could come together for a pipe or two and a game of cards. It was not unusual for a man with a team and scraper to make⁽²⁾ only three round trips of forty rods, in half a day. The view of the men who did the work is admirably expressed⁽³⁾ in a little anonymous poem which reads thus:

"Oh, our life was tough and tearful, and
its toil was often fearful,
"And often we grew faint beneath the load.
"But there came a glad vacation and a
sweet alleviation,

- (1) A.B. Choate - Office of Road Inquiry
Bulletin No. 2 - p. 11.
(2) Observations in Fairbault Co.
(3) Quoted by Hulbert - IX, 104.

"When we used to work our tax out on the road.

"When we used to work our tax out, then we felt the joys of leisure,

"And we felt no more the prick of labor's goad;

"Then we shared the golden treasure of the sweet rest in fullest measure,

"When we used to work our tax out on the road."

With such a system and such an attitude on the part of the public, no different statement of the results could have been expected than that made by Hulbert (4) in these words, "We have today probably the poorest roads of any civilized nation." But it is only within recent years that this fact and its significance have begun to dawn upon the American people. No one had thought about it before. With the rise of this recent movement, however, it was found that the system produced bad roads and that it was accompanied by wholesale wastes. Vast strips of land four rods or more wide lay uncultivated and, in their unimproved condition (6) represented an enormous amount of fallow capital. But the economists went farther into the problem. They

(4) Hulbert - XV, 15.

(5) Ibid. XV, 48.

(6) Jenks - 18.

estimated, and their estimates were judiciously made, that 75% of the commerce of the world starts out on wagon roads, and that \$600,000,000 are paid annually in the United States to carry the products of the farm to the nearest railroad. ⁽⁷⁾ These are conservative estimates. Some authorities make these figures 90 per cent and \$800,000,000. The cost per ton-mile on the ordinary earth-roads in the United States is about 25 ⁽⁸⁾ cents; The average distance from the farm to the nearest market is at least ten miles. ⁽⁹⁾ By actual experiments, it has been proved that it requires four times as many pounds of traction-power to move a load over a common earth-road as it does to move the same load over a good plank road; a little over three times as many as it requires on a macadamized road; and over four times as many as are needed on a Telford road. ⁽¹⁰⁾ In other words, from three to four times as large a load could be drawn by the same power over a good macadam or Telford road as over a common earth road. If the typical muddy road were taken, the difference would, of course, be strik-

(7) Hylbert - XV. 16.

(8) C. Day: Hist. of Commerce -292

(9) Hulbert - XV, 16.

(10) From Gillmore's Experiments - Jenks- 12.

ingly greater. The effects of these differences on the cost of transportation are evident.

At the same time there came to light the steadily growing tendency among the boys and girls of the rural communities to abandon their isolated homes and seek the culture of the cities, and this during the formative period of the life of the children before the principles of modern agricultural production would enter in to explain such a movement. It was natural that these young people should do so, for what they sought was justly theirs; but it was unfortunate that the systems of communication had so failed to keep pace with the progress of society as to make such a migration necessary. The rural schools and churches starved and decayed. The moral tone of the communities fell to a lower plane. Farmsteads came to be more shabby and ill-kept from year to year. The vital re-enforcements from the younger generation failed to appear. The free and open rural life which should be the ideal one came to be the symbol of stagnancy and drudgery. This phase of the

problem gave it a sociological significance.

More important than any of these perhaps was the fact that this was an age of science. Never before had the scientific spirit so dominated the affairs of the world as during this period. It crept into the activities of every institution from the humblest kitchen to the highest office of the government. It was utterly incompatible with the savage road system which prevailed. A clash was inevitable.

There remain yet to be mentioned certain inventions of this period which depended for their ultimate success upon good roads - the bicycle appearing in its improved form in the early eighties, and the automobile in the late eighties and early nineties. Both had been invented much earlier than this, but they were not sufficiently perfected to be of much use or in great demand. The last ten years of the nineteenth century, however, marked a phenomenal epoch in the use of these vehicles. Although limited to the cities at first, it was not long before they had penetrated into the most

secluded nooks of the country. As they increased in number, they howled and whistled and tooted for better roads. Leagues and associations were organized in large numbers - local, state, interstate, national, international. ⁽¹¹⁾ Conventions were held, circulars issued, and the magazines and newspapers were flooded with a didactic literature noted for its few principles and many words.

In all this the farmers took no interest. To them, it was no more than the wind blowing in the tree-tops. They had bicycles, to be sure, and they used them whenever the roads permitted it; at other times, they stored them away. They were rare luxuries to them to be resorted to only in favorable weather. But an automobile was looked upon with suspicion and fear, as an enemy of the public peace. Its proper sphere was the city. Hence they considered all this commotion about good roads simply a scheme by which the rich men of the cities would reap an undeserved benefit at the expense of the poor farmers. It may be that their argument was not entirely unfounded, However that may

(11) For list of Good Roads Associations in 1902, see Office of Pub. Roads, Circular, No.36.

have been, the establishment of the rural free delivery furnished a connecting link between the farmers and the automobile men, and made it possible for them to co-operate in the movement and make it a success.

The sociologists, the economists, the educators, all took a hand in the work and contributed from their special points of view. To lessen the cost of transportation; to place at the disposal of the rural population the cultural advantages of the city; to make the country the ideal resort instead of the city - these were some of the ultimate ends in view. Prominent educators urged good roads as a pre-requisite of the consolidated school. Better highways would make possible a strong central church. Theatres, lectures, and entertainments would be within reach of all. Elections and political affairs in general would become more popular and interesting. The experience which comes to a person who is present in a rural school, or church, or polling-place, on a rainy day, is the most forceful argument possible in favor of better roads. The advan-

(12) President Jesse of Mo. "U" - Hulbert XV, 19.

tages to be gained from a system of good roads are beautifully summed up by Mr. W. W. Pendergast, in his address to the Good Roads Convention at St. Paul in 1894. Says Mr. Pendergast,

(13)
"A perfect highway is a thing of beauty and a joy forever. It blesses every home by which it passes. It brings into pleasant communion people who otherwise would have remained at a perpetual distance. It awakens emulation, cements friendships, and adds new charm to social life. It makes the region it traverses more attractive, the residences more delightful; it stimulates a spirit of general improvement. Fields begin to look tidier, shabby fences disappear, gardens show fewer weeds, lawns are better kept, the houses seem cozier, trees are planted along its borders, birds fill the air with music, the world seems brighter, the atmosphere purer. The country is awake, patriotism revives, philanthropy blossoms as selfishness fades and slinks from view. The school-house and the church feel the magic influence - the wand of progress has touched even them; the old are young again, the young see some-

(13) Office of Road Inquiry - Bul. 2, p.7.

thing now to live for, and to all life seems worth the living. The daily mail reaches each home. The rural cosmopolitan feels the daily pulse of the world. Wheelmen are no longer confined to the cities. Bicycles now within the reach of all, are no strangers among farmers. The golden days of which the poets long have sung are upon us. The dreams of the past are coming true. Nothing can thwart the will of fate."

This movement, therefore, looked beyond the old narrow view and revealed the fact that the benefits coming from good roads were not limited to the farmers, but extended to the cities, the state, and the nation. Solid highways enhance the value of the farms by which they pass. They increase the business of the cities and make possible more regular markets, fresher produce, better service. They make the crops of the state more valuable in that the products can be put upon the market at any moment. They facilitate the delivery of the mails and the perfection of the educational system.

When these facts are taken into account, it seems unreasonable to impose the whole burden of the expense involved upon the rural population. All the more so when it is remembered that the taxes upon American farms pay about fifty per cent of the operating expenses of the government and only about ten per cent of the benefits return to the farmers directly. (14) A large portion of the energy of the movement has, accordingly, been expended in trying to secure legislation which would authorize aid from the counties, the state, and the federal government. An encouraging number of states has already adopted the state-aid plan, according to which the expenses of road-building are divided among the state, the county, and the township. New Jersey, the pioneer state in the good roads movement, was the first one to adopt this plan; and, under it, she has constructed more permanent roads than any other state in the union.

The movement for national aid began to be prominent in 1892 when a bill, passed by the senate and re-

(14) Hulbert XV, p. 21.

ported favorably by the house, provided for a National Highway Commission, to be made up of two senators, five representatives, and five others appointed by the president, for the purpose of making an "inquiry into the conditions of highways in the United States and means for their improvement."⁽¹⁵⁾ In October of the same year, a National League for Good Roads was formed at Chicago. Through this league, a petition, signed by many prominent governors, municipal chambers of commerce, Universities, and endorsed by a large number of legislative resolutions, was presented to Congress in March, 1893, asking for the institution of a national department of roads. As a result of this petition, the Office of Road Inquiry was created March 3, 1893, as a subdivision of the Department of Agriculture.

This Office was given power to inquire in regard to systems of road-administration and methods of road-making; to prepare publications and distribute them. An appropriation of \$10,000 was placed at its disposal. In 1897, the sum was reduced to \$8000 where it remained

(15) Communication from Office of Pub. Roads, 1909.

until 1901 when it was increased to \$14,000. The raise at this time was made to cover the cost of experiments in road-building. In 1902, the Office was given authority to test the chemical and physical qualities of the different road-materials, and the appropriation was made \$20,000. Thus it was increased from year to year until in 1908 it had reached \$87,390. In 1905, the name was changed to the "Office of Public Roads". The work of the Office has been chiefly of a didactic character. Besides issuing bulletins, circulars, and special reports, it has constructed 200 object-lesson roads in 34 different states. These illustrate the various types of roads - Macadam, telford, brick, gravel, sand-clay, shell, and earth- and have proved very effective stimuli wherever they have been built. In connection with these object-lessons, lectures and personal advice have been given by the engineers and experts of the Office. Samples of road materials have been received by the thousands and tested free of charge. In 1905, the Office was allowed to introduce a system by which "graduates in engineering are appointed from colleges

each year after a competitive examination, and are given a thorough training while rendering practical services to the government." (16) The number of men employed in the office has increased from one, in 1893, to 65, in 1908. The policy of the Office has been to co-operate as much as possible with the road authorities of the states. (17)

The associations already referred to did not limit their work to mere talking and writing. In 1899, the Interstate Good Roads and Public Improvement Association invaded the states of Minnesota, Wisconsin, Iowa, Illinois, Missouri, Tennessee, Arkansas, and Texas, in an active campaign. (18) Thirty-four sample roads were constructed under the direction of men from the Road Office at Washington. Conventions were held and circulars distributed. All this at an expense of 9000. In the spring and summer of 1901, a good-roads train made a similar excursion through the South. (19) The Illinois Central Railroad Company furnished the train, which consisted of nine cars for

(16) Ibid

(17) The whole discussion of the Office of Public Roads is based upon a direct communication with the Office, 1909.

(18) Office Public Roads - Circular, No. 34

(19) Dodge - in Forum XXXII, 296.

machinery, one for laborers, and one dining and sleeping car. The machinery was loaned by various manufacturing companies. Experts from Washington had charge of the road-building and the conventions.

But the demand for federal aid was not yet satisfied. Something more direct was wanted. Representative Brownlow of Tennessee introduced a bill in 1904 which embodied these additional requirements. (20) It provided for a Bureau of Public Highways, with duties and powers identical with those now exercised by the Office of Public Roads, to be made up of three "Commissioners of Highways" - two appointed by the president by and with the advice and consent of the Senate, the third by the president alone from the Engineer Corps of the United States army. It appropriated \$24,000,000, a third of which was to be available in each of three years. Any state, or any civil division within a state, could apply to the Bureau for aid. One-half of the expense of the proposed road would then be paid out of the treasury of the United States after the

applicant had given evidence of the fulfillment of these four requirements, to the satisfaction of the Commissioners; first, that the proposed road would be of public importance, for common traffic, and for the delivery of the mails; second, that the right of way had been secured; third, that it would be kept in repair without further federal aid; and fourth, that the balance of the expense had been provided for. In regard to the distribution of the appropriation among the states, the bill specified that "No. state or territory shall receive in any one year a larger proportion of the sum hereby appropriated than its population bears to the total population of the United States." The bill was referred to the committee on Agriculture and Forestry, where, on January 26, an elaborate hearing took place. (21) Petitions, views, and reports from individuals and Good Roads Associations were sent in and delivered. Legislative resolutions, among them one of Minnesota, urged the passage of the bill. But Congress was not ready to take the desired step. The act failed. In 1907, the same bill was again introduced, and rejected

(21) Senate Doc. - 58th Cong., 2nd S.
Document No. 204

a second time. Other bills of the same nature, during the session of 1907 and in increased numbers during that of 1909, fared likewise. The tendency, however, seems to be toward some such plan, and it is very probable that in the near future an act embodying this system will be adopted.

Another phase of the struggle for good roads is that which urges continuous care of the highways, instead of the old neglect- repair- and-no-improvement-method. This, of course, involves the overthrow of the whole system of road administration and the inauguration of a new one with central and local commissions made up of expert men. The chief enemy of the road is water therefore, the first principle of good road-building is a scientific system of drainage. But to install such a system at the time when the road is built is not sufficient. Every rut and hollow must be filled up as soon as it appears, for otherwise water will collect in it, penetrate into the road and dissolve and crumble it. The log-drag has played an important part in this method of maintaining earth roads. It was originally

invented in Missouri, but, more recently, by a farmer in Blue Earth county, Minnesota; and it is in the latter state that it has been most extensively used and advertised.

The cost of the various kinds of roads naturally varies very greatly. The "Old Cumberland Road" begun in 1811 and completed for about 700 miles, involved an expense of nearly \$7,000,000, or \$10,000 per mile. That was essentially a macadamized road. New Jersey today builds roads of macadam at a cost of from \$2000 to \$5000 per mile, varying with the depth and width of the road and the distance over which the material has to be hauled. Telford roads can be built at \$4000 or \$5000 per mile; good gravel roads, at from \$1000 to \$1300. A very satisfactory earth road, nineteen feet wide, can be constructed at a cost of \$300 per mile, and often at a figure even lower than that.

With the introduction of new methods in road-making has come also the invention of new machinery the most important of which are the steam roller and

(22) Cong. Record. Feb. 1903, p. 6380

(23) Hulbert - XV, 164.

(24) Ibid.

(25) Jenks - 46.

the stone-crusher. These two, and the log-drag, have a great future before them.

The question of convict labor has not received much attention as a part of the general campaign for good roads. The concensus of opinion seems to be that prison labor should not be resorted to for work on the public roads, chiefly on account of the demoralizing influence that would result. North Carolina and South Carolina are the only exceptions to this rule. (26) Several states, of course, use convict labor to prepare road materials within the prison walls. (27) California and Delaware are among these. Minnesota provided for such a system in the State Reformatory, in 1909.

Thus, the good-roads movement came at a time when road legislation and highway administration were hopelessly antiquated. Its beginnings were small, but its end will be great. As yet, it is young, and there are many problems left which it has not touched upon. Among these could be mentioned that

(26) Off. of Pub. Roads - Bulletin No. 16.
 (27) Ibid.

of the dust preventives - tar and oil, and others. It has been successful in a remarkable degree: a spirit of enthusiasm has been aroused everywhere; the co-operation of men of all classes has been secured; favorable legislation has been introduced; an organization and a recognition which will have great weight in the future have been established.

CHAPTER V.
STATE LEGISLATION, 1893 - 1909

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The spirit of the good-roads movement reflected itself but slowly on the legislation of the period. The change in the general policy of road administration, away from the haphazard towards the scientific, away from localization towards centralization, appeared only gradually and at a rate almost imperceptibly progressive. And naturally so, because the old system had become so fixed and established by long usage that it was looked upon as something immutable and not-to-be-touched. The laws passed during the first sessions were of the same order as those enacted in the preceding period, with the single exception that they were all, nominally at least, general acts, to comply with the constitutional amendment of November, 1892, prohibiting special legislation in this field. In fact, the nineteenth century came to a close with the primitive system and all its antiquated features still

in force. With the twentieth century, however, was ushered in a new era in the history of road legislation and administration. Reform measures were early introduced, but their recognition was a tardy one, and their support was spiritless. Of course, these new ventures have just begun and their greatest results are yet hidden in the bright and promising future.

No important road-laws were enacted in 1893. Two years later, however, progressive legislation began. Chapter 46 of the general laws of 1895 made it possible for the townships, at their annual meetings, to abolish the election of road-overseers and to require all road-taxes to be paid in money. A petition⁽¹⁾ signed by at least twenty per cent of the tax-payers of the township had to be filed with the town clerk as a preliminary step to any such change. After any town had adopted this system, its Board of Supervisors was to have complete control of all road-matters - contract for work, appoint necessary overseers, and take other requisite measures. This act was a step in the right direction, but the fact that it was

(1) General Laws - 1895 - p.161.

optional and not compulsory in its application made it of little effect. - Another act of the same year required persons or corporations owning land along any highway to destroy all noxious weeds growing beside the road, at such times as should be necessary to prevent them from bearing seed. In case any person or corporation failed to do so after due notification by the road-overseer, it became the duty of that office to perform the work at the rate of two dollars per day to be added to the road-tax of the neglectee. This act was passed chiefly in the interest of agriculture, but secondarily also for the purpose of bettering winter roads. - Chapter 287 reads in part as follows: "There shall be established ~~on~~ provided by the county commissioners of each county, a fund for the construction, maintenance and repair of roads and bridges in such county to be known as 'the General Road and Bridge Fund'." (2) To maintain this fund the county commissioners were authorized to levy an annual tax not to exceed one mill on every dollar of assessed

(2) Ibid p.651

These weeds were mentioned: Russian, Canada, and other thistles; burdock; white, or ox-eye, daisy; wild mustard; snapdragon, or toad-flax; cocklebur; snow-thistle; sour dock; yellow dock.

(3) Ibid - p. 680

valuation. Here, then, was created the first real fund to be devoted exclusively to the betterment of public roads. In 1895! After nearly 40 years of proud statehood! The beginnings of a fund had thus at length appeared; but there was yet no expert provided to direct its expenditure. Another important measure went into effect with this one through which the commissioners of the various counties were empowered to issue bonds for road and bridge purposes to an amount not to exceed one per cent of the assessed valuation of the county. ⁽⁴⁾ The question of such bond-issue, however, in every case had to be submitted to a vote of the people! The amount of bonds authorized in this case was very limited, so much so, in fact, that it was of little service. This has been one of the chief checks upon rapid advancement in road-building during recent years, not only in Minnesota, but also in the other states. The roads have been neglected so long that, if they are to be brought into proper condition, heavy bonding has become absolutely necessary.

(4) Ibid - p. 682.

Another chapter recognized the value of a hard-pressed road and so encouraged the use of broad-tired wagons by making a reduction in the road-taxes of all persons owning them, at the rate of two dollars per vehicle.⁽⁵⁾ As a whole, the session of 1895 was a fruitful one in that it opened the way for more extensive action in the years to come. The legislation had already begun to be colored by the new movement, although few of the principles advocated had as yet been embodied in laws.

April 23, 1897, an act was passed which provided that, whenever the votes of any township should so direct, the Board of Supervisors was to employ a competent surveyor or civil engineer to supervise the construction and grading of the roads within the town.⁽⁶⁾ This law shows very distinctly the growing recognition of the need of experts in road-making. Several other acts were passed by this legislature but none of them introduced changes which need be noted here. An amendment to article nine of the constitution was proposed which opened the way not only for the introduction of the state-aid

{5} Ibid - p. 748.

{6} Ibid - 1897 - p. 588.

plan but also for ⁽⁷⁾ a more centralized system of highway administration. Out of the income from the Internal Improvement Land Fund, together with all other moneys accruing for state road or bridge purposes, it created a "State Road and Bridge Fund" to be used exclusively for the construction and improvement of the public roads of the state. It authorized the legislature to increase this fund by levying an annual tax on all property within the state at a rate not to exceed one-twentieth of a mill per dollar. It further gave the legislature authority to provide for the appointment by the governor of a "State Highway Commission," It provided that "Such commission shall have general superintendence of the construction of state roads and bridges and shall use such fund in the construction thereof and distribute the same in the several counties in the state upon an equitable basis. Provided further, that no county shall receive in any year more than three (3) per cent or less than one-half (1/2) of one (1) per cent of the total fund thus provided and expend-

(7) Art. IX, Sec. 16.

ed during such year; and, provided further, that no more than one-third ($1/3$) of such fund accruing in any year shall be expended for bridges, and in no case shall more than one-third of the cost of constructing or improving any road or bridge be paid by the state from such fund." The amendment was ratified by the people November 8, 1898. At first sight, this amendment looked like a great achievement for the friends of the good-roads movement; and, as far as the creation of a state road and bridge fund and a state highway commission were concerned, it was so in fact; but the limitations imposed upon the legislature in regard to the amount of taxes to be collected for this purpose and upon the commission in regard to the distribution of the fund among the counties were such as to hinder considerably the effective working of the plan. The inadequacy of the fund was soon discovered. The legislature of 1901 proposed an amendment changing the maximum rate of taxation from one-twentieth of a mill to one-tenth of a mill. In 1905, a rate of one-fourth of a mill was proposed. The legislature of 1907 went one step farther and introduced an amendment striking

(8) General Laws- 1901 - p. III.

(9) Ibid - 1905 - p. 280.

out all of that part of section 16 which limits the rate of tax levy, thus leaving the provision more elastic and general. ⁽¹⁰⁾ In 1909, the rate suggested was one-fourth of one mill on all taxable property. The maximum share which the state might pay in the construction of any road was now raised to one-half. ⁽¹¹⁾ So far, all of these amendments have failed to be ratified, and the unfortunate insertion of the one-twentieth-of-a-mill clause in the original act still continues a detriment to the rapid improvement of Minnesota roads.

The legislature of 1899 made several advances, but often limited their application to the larger counties. In all counties with a population of 200,000 or over, it was made the duty of the surveyor to superintend the opening, construction, and improvement of all roads within the county. ⁽¹²⁾ By another act, the commissioners of such counties were given exclusive control over the expenditures of appropriations from the road and bridge fund. ⁽¹³⁾ One chapter provided that, upon the petition of 15 or more legal rates and landholders

(10) Ibid - 1907 - p. 784

(11) S.F. No. 442.

(12) General Laws - 1899 - p. 23

(13) Ibid - p. 52.

of any township, the town clerk should call a meeting to consider the question of establishing "permanent
 (14)
 hard roads." A vote of sixty per cent was required to carry any proposition of this kind. The town supervisors were authorized to receive bids and let contracts and to issue bonds in such amounts as should seem necessary, but the total indebtedness of any township might never exceed five per cent of the assessed valuation of such town. By another law, the commissioners of the various counties were allowed to provide for
 (15)
 the maintenance of all bridges over 100 feet in length. This relieved the township of a heavy burden and at the same time tended in the direction of centralization.

Two acts passed by the legislature of 1901 are important and interesting fruits of the struggle for better roads. The one abolished the assessment of highway labor and required all road-taxes to be paid in
 (16)
 money, in counties with a population of 150,000 or over. The elective overseer of highways was also set aside and provision made for the appointment of that officer

- (14) Ibid - p. 250.
 (15) Ibid - p. 419.
 (16) Ibid - 1901 - p. 411.

by the town Board of Supervisors. The other was for the benefit of wheelmen, and applied to all counties with a population of not less than 50,000. ⁽¹⁷⁾ Upon the petition of 200 resident wheelmen, the county board was to appoint a "Board of Side-path Commissioners" consisting of five members. Each city and one or more villages within the county were to be represented on this board, as nearly as practicable in proportion to the number of resident bicyclists. The term of service was five years, one member going out each year. This board was authorized to construct and maintain side-paths, after securing the written consent of the county commissioners, the village trustees, or the city council, as the case might be. A side-path fund was to be created from the income of licenses required of all who made use of the paths and from fines collected for violations of the side-path law. Except in the immediate vicinities of the cities, the application of this act would, of course, be very limited.

April 20, 1903, a law took effect which empowered the county boards of all counties having a population

(17) Ibid - p. 153

of 200,000 and over to expend \$6000 in purchasing road-
 (18)
 rollers and rock-crushers. Sufficient funds might be
 expended by these counties to maintain and operate this
 machinery. Only one other measure of importance was
 enacted by this legislature. Village councils were
 allowed to appropriate for the improvement of roads
 leading into any village such reasonable sums, not ex-
 ceeding \$1000 annually, as they should deem fit.
 (19)

In 1905, six years after section 16 had been
 added to article 9 of the constitution, was passed the
 act which more than any other embodied the fundamental
 principles of the good-roads movement - centralized ad-
 ministration, scientific methods, expert supervision.
 Not complete and perfect all at once, to be sure, but
 with foundations and great possibilities. Section 1
 of the act of April 13, 1905, brought the long-sought
 innovation in these words. "Within a reasoable time
 after January 1st, nineteen hundred and six (1906, the
 governor shall appoint a board of three commissioners,
 one from the First, Second, Third or Fourth congression-
 al districts, one from the Fifth, Sixth, or Seventh,

(18)Ibid - 1903 - p. 512.

(19)Ibid - p. 126.

and one from the Eighth or Ninth, to be known as the state highway commission; one shall serve one, one two, and the other three years, each year thereafter he shall appoint one commissioner for three years, or until his successor has qualified, but not more than two members shall belong to the same political party. Such commissioners shall serve without compensation except their actual personal expenses while in the performance of their official duties. The governor shall fill all vacancies and may remove a member for inefficiency, malfeasance, or neglect of duty. All questions shall be determined by a majority vote of such commissioners." This commission might elect its own chairman, appoint a skilled engineer and road-builder to act as secretary, employ a stenographer and other necessary assistants. The commission as a whole was to hold regular meetings at least once in every two months. The burden of the work, however, fell on the secretary. It was made his duty to keep the minutes of all the meetings of the commission; to file all maps, papers, and plats; to have charge of the office at the capitol; to give ad-

vice and assistance in regard to road-construction throughout the state; to supervise road-building; to make estimates of the cost of various projects; to investigate and locate the road-materials of the state; to hold public meetings; to investigate the road-laws of different states and the most approved methods of road-building; to report annually to the governor; and to recommend needed legislation. He was also given the authority to issue regulations and orders for the construction and improvement of roads. These, however, were not to be obligatory. It was the secretary, too, who should take care of the distribution of the money in the Road and Bridge Fund. This apportionment was to be based upon several considerations: the area of the county; the amount of money expended by that corporation; the difficulty and expense of road construction; extra obstacles met with in new counties. In order to make such a distribution possible, the county auditors were required to report annually to the secretary of the commission the

exact amount expended on the roads of their respective counties. An appropriation of \$6000 was included in the act. The commission, as here provided, is largely advisory and experimental; but, judging from present indications and tendencies, its powers and influence will grow and expand from year to year as the local authorities come to depend upon it more and more.- The one serious objection to the whole system is that the commission is still left in the hands of politicians - a place where it is not only unsafe but even very risky to leave anything which is in the slightest degree capable of distortion and abuse. There is no valid reason for this situation. The construction and administration of roads is a science which can be mastered only by experts and specialists, and one which politicians have no business to meddle with. The importance of the act, however, should not be minimized. It seems to have been a necessary step in the transition from the old order to the new. One more sweep, and the politician will be out!

By the provisions of chapter 131, in all counties having a population of 75,000 or over and an area of not less than 5000 square miles, the commissioners were authorized to divide their respective counties into two or more road-districts and to appoint one or more foremen for each district. ⁽²¹⁾ These foremen were to be directly responsible to the county board and immediately under its supervision

⁽²²⁾ In 1907 a similar act was passed. In all counties having a population of less than 200,000, the county boards were allowed to appoint a county superintendent of highways whose duties were much like those of the foreman just referred to. This law abolished the elective road-overseer of the township and gave the town board authority to appoint a road-inspector to act under the direction of the superintendent of highways. This act was declared unconstitutional by the Supreme Court on the ground that for legislation of this character population alone furnished no proper basis for ⁽²³⁾ the classification of counties.

(21) Ibid p. 167.

(22) Ibid - 1907 - p. 707

(23) Hjelm Patterson et al. - Sup. Court of Minn., Aug. 7, 1908.

Several bills were introduced during the session of 1909. One of the most important of them provided for the payment of all road-taxes, except poll-taxes, in money. (24) It renewed that part of the law of 1907 which related to the appointment of town Inspectors of Highways. This bill was defeated by a large majority. It was a radical measure and one which would have overthrown the last stronghold of the old system. For such a change, the people at large are not yet ready, although the tendency at present is strongly in that direction. They have a deepseated suspicion that all such new and sweeping measures are so many political intrigues through which the office-holders are hoping to gain an advantage. And besides this, money, to the farmer, appears to be worth much more than labor - to him, a debt paid by work is so much clear gain. This idea has lingered on from the early days of the state, when it was formulated from the force of necessity, up to the present time, when conditions and circumstances everywhere cry out against it. It is bound to go; and the fact is

(24) H.F. No. 135 - 36th session.

that it is going.

The total amount appropriated by the legislature for bridges and roads during this period was \$706,323. The amount increased gradually from session to session until in 1909 it had reached \$300,000. These sums are not parts of the State Road and Bridge Fund, but are taken out of any money in the general treasury not otherwise appropriated. The legislature specifies the place where the bridge or road is to be built in each case, and no warrant is issued on the treasury before satisfactory completion of the work is reported to the auditor by the county commissioners. The law always stipulates under whose supervision the various sums shall be expended. Prior to 1909 this duty was imposed upon the county commissioners, the town supervisors, village or city councils, or special commissions made up of three or more persons selected from the locality in which the road or bridge was to be built. The legislature of 1909 made one innovation: Several of the special commissions were made up of members of the legislature. Bad as this whole practice was before, this

invention made it utterly unendurable. \$300,000 dished out in a liberal and haphazard way by the members of the legislature to insure a heavy patronage in the next campaign! If the state had that sum to expend on its roads, why should it not have trusted its Highway Commission to apply it in a scientific and permanent way, instead of offering it as a reward for wastefulness and corruption? If this sum could not have been constitutionally expended by the Highway Commission, it might far better have been appropriated for some other purpose where it could have been scientifically applied. Public sentiment has already been considerably aroused against this fraud, and it will not be long before it will pass into the voluminous category of "sins of the past."

Slow as the progress in road-making may seem when looked at piecemeal and weighed and measured constantly with what it should have been, when contrasted with what it was at the beginning of the territory, it is after all considerable. Taking the years 1850, when

for all practical purposes zero may be taken as the measure of mileage, expenditures, and improved roads, and 1904, the advancements of half a century become clear. In 1904, the total mileage of public roads was 79,324. Of these, 6,179 miles were surfaced with gravel; and 67 miles were of macadam. The total amount of expenditures from all sources and by all agents was \$1,961,629.24. This was made up of a property tax of \$1,542,641.99, a labor tax of \$354, 212.25, and bonds to the amount of \$64,775. The most striking fact in connection with these figures is, of course, the small percentage of improved roads. This has been modified to a considerable extent during the last five years. It is all fully explained by the lack of scientific and expert administration of the highway system. Recent legislation has remedied the deficiency somewhat, and out of these steps will develop that system which gave France the most perfect roads in the world, that system which transformed all rural Belgium, that system which has made New Jersey an automobile resort, that system which will make Minnesota the Garden of Eden that she was destined to be.

CHAPTER VI.
SYSTEMS OF ROAD ADMINISTRATION IN OTHER
STATES AND COUNTRIES

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Only a very brief and incomplete statement of a few of the most important road systems of the world can be given here. These may serve as the crude material from which to construct a better and a more perfect system than any that has yet appeared; for it is only by a study of the old and a continuous sorting out of the good elements and combining them into different unities that the new and improved is created.

"The roads and the road system of France are doubtless the best in the world." (1) This is due to the perfection to which road administration has been developed in that state since Napoleon the First began his great reforms. For the last fifteen years France has built very few new roads, but the whole road-portion of her energy has been expended in maintaining and improving

(1) Isaac Potter. - S. Doc. 204 - 58 C. 2nd S.
p. 97.

her old ones. There are in France about 130,000 miles of macadam roads at present, maintained at an annual expense of 48 cents per capita. ⁽²⁾ All of these roads are grouped into three general classes: first, National roads - those connecting Paris with the leading provincial cities, and one fortified town with another, maintained entirely by the state through state engineers the chief of whom is the Minister of Public Works; second, departmental roads - those connecting the various towns of the department with one another and with towns in neighboring departments, narrower than the national roads but carrying just as great a traffic, and constructed and repaired from the funds of the department; third, township or local roads - those which are of purely local importance, maintained by local taxation and labor and by special taxes levied on industries that subject the roads to more than the ordinary wear. The organization of the road officers is on a military basis. The roads of each department are divided into cantons varying in length from a few hun-

(2) Ibid - p. 97.

dred yards to a mile or more, according to the difficulty or ease of maintaining them. Each canton is in charge of a cantonnier who is responsible for the piece of road allotted to him. Six of these cantonniers form a brigade over which is placed a cantonnier-chef. Then, several brigades are grouped together and placed under the immediate charge of a superintendent who thus becomes responsible for forty or fifty miles of roads. He is required to inspect his road-district and report upon its condition twice every month. Over the districts of the township or arrondissement an engineer is placed who directs the under-officers in all their work. Thus the whole system is under the supervision of the Minister of Public Works, who is himself an expert. The carts and wagons of France must all have wide tires - six inches is the most common width. Furthermore, the rear axle of a wagon is often made longer than the fore so that the hind wheels may run a little outside of the front ones. Thus ruts are to a large extent prevented and, at the same time, the surface of the road is con-

tinually subjected to an effective roller. So efficient has the road service of France been made that it is now a strong competitor of the railroads. This is true even to a larger extent in Belgium, where the French system has been adopted. In one respect the roads of Belgium are even superior to those of France - they are more beautiful. Rows of trees, from one to four deep, fringe the ways throughout their entire course and form charming little groves at every crossing.

In Germany a somewhat similar system prevails. The principal highways are controlled by the central government, and all others by the component states. There is considerable variation from state to state, but the general outlines of the systems are the same. Saxony has all the roads grouped into three classes - state, country and private. The first two classes are under the supervision of a state road commissioner assisted by a skilled road-director. Locally, the supervision is in the hands of the chief executive officer of the district, a ministerial officer, but immediately in

charge of the road inspectors, who are directly responsible to the antshauptmannschaft. Then there is a large number of state roadmasters who direct and supervise both state and country roads. The state, in every case, pays the larger part of the expenses. In Germany, the telford road is the prevalent one as opposed to the macadam road in France. Saxony has given a great deal of attention to the cultivation of trees along the highways. In 1890, fruits to the value of \$30,000 were sold from trees growing along the state roads. In this way Saxony has advanced a step ahead of Belgium, for she has secured, not only the beautifying effect of the presence of trees along the wayside, but also a new source of revenue for the state.

"The roads of Great Britain are decidedly inferior to those of France, and the reason for this can doubtless be traced to the different systems adopted by the two governments." A money-tax was substituted for the old labor-tax, in 1835. The highways are maintained by the tax-payers of the parish under the direction of a

(3) Ibid - p. 99.

(4) Ibid - p. 96.

highway supervisor. Several of these parishes are united to form districts over which are the highway boards. The local government board of London has a vague and indefinite supervision over these districts where they are of interest to the whole county. But all of these systems are independent of each other and owe no responsibility to the central administration. In 1882, by an act of parliament national aid was provided for. (5) One-fifth of the expenses of the counties was thereafter to be paid by the central government. The highway tax is limited to twenty cents on the pound, or a little over four cents on the dollar. The expenditures which England makes on her roads are more liberal than those of any other country, but, on account of the loose and disjointed system of administration, a large part of this money is wasted.

Italy and Switzerland both have admirable roads and highway systems of the Napoleonic type. Austria resembles England more than France in this respect. Russia, as far as her roads are concerned, has not yet

(5) Senator Blankhead - Speech in Senate, Apr. 24, 1908.

emerged from the dark ages.

In the United States there is as yet no federal road administration. What corresponds to it most nearly is, of course, the Office of Public Roads in the department of Agriculture; but even this is chiefly an educational office and an experiment station. The highways of this country have been left almost exclusively in charge of the various commonwealths. Accordingly no uniformity of system can be looked for. The tendency, however, during the last two decades has been towards a centralization which has found its expression in the various acts creating State Highway Commissions. Nineteen states now have such commissions
(6)
in one form or another.

New Jersey was the first state to adopt such
(7)
a system. This she did through an act of 1894 which provided for the appointment of a Highway Commissioner, by the governor and the senate, to serve for three years at a salary of five dollars per day and expenses. This system differed from that of Minnesota chiefly

(6) Correspondence with Secretaries of State.

(7) Laws of New Jersey - 1894.

in that it was entirely removed from politics and left exclusively to expert engineers. The short tenure of the commissioner was the principal defect in the system.

The Highway Commission of Rhode Island was created in 1902. (8) It is made up of five members appointed by the governor for five years, one retiring each year. The commission is authorized to employ such engineer assistance as it may need. The members serve without compensation, as in Minnesota. It is the duty of the commission to make investigations of the roads within the state and to report to the Assembly all main highways which need to be reconstructed or improved. If the Assembly approves the recommendations made by the commission, it makes an appropriation for carrying out the project. These highways are then built entirely by the state, under the direction of the Highway Commission. In no case, however, may more than one-third nor less than one-seventh of the net appropriation made be expended in any one county.

(8) Report of State Board of Public Roads--
R. I. 1908 - p. 13.

In Maine there is a State Highway Department with a Commissioner of Highways at its head. He is appointed by the governor with the advise and consent of the Council, for four years, and must be a civil engineer. ⁽⁹⁾ Subject to the approval of the governor and the council, he may appoint an assistant commissioner who must also be an engineer. The designation of roads as state roads is left to the county commissioners. When any road is declared to be of sufficient importance to be improved on the state-aid plan, the township may apply to the Highway Commissioner for such aid. The apportionment of this aid depends largely upon the assessed valuation of the townships; but no aid is given before the town has set aside for the purpose of permanent road improvement a certain sum over and above its general highway appropriation. In 1907, the aid given by the state amounted to \$130,550.90.

Vermont has a Highway Commissioner appointed by the governor and the Senate for a term of two years. ⁽¹⁰⁾ He controls and directs the expenditure of all appro-

(9) Report of Com. of Highways - Maine, 1907, p. 30.

(10) Gen. Laws of Vt. Relating to Highways, p. 775.

priations made by the legislature for road purposes. (Right here the Vermont system differs radically from that of Minnesota). He issues orders and regulations to the local officers in regard to such expenditures, and, with the advice and consent of the governor, he appoints county supervisors to aid him in enforcing them. The legislature appropriates any sum, not exceeding \$300, to any town which raises an equal sum for road or bridge building. (11)

Other states having Highway Commissions are Iowa, Connecticut, Delaware, Maryland, Oklahoma, Colorado, Idaho, Massachusetts, Tennessee, Illinois, Pennsylvania, Missouri, Virginia, and New York. As a rule, the establishment of a commission has also marked the formal introduction of the state-aid plan. The amount of such aid varies greatly from state to state. In New York, the state furnishes 50 per cent, the county 35, and the township 15; while in New Jersey the amount is equally divided among the state, the county, and the owners of abutting property. (12)

(11) Office of Public Roads - Bulletin, No. 32, p. 40.

(12) Hulbert XV, p.50.

In 1904, Massachusetts led in the percentage of permanent hard roads, a little over 51 per cent of her roads being surfaced with gravel or stone. Ohio had 33 per cent; Connecticut, 30; California, 19; New Jersey, 16; Michigan, 10; Illinois, 8; Minnesota and New York, 7.⁽¹³⁾ It should be noted that these figures do not form an accurate index to the percentage of good roads in any state in as much as they do not include well-made earth-roads.

France and Belgium hold first rank now, and will perhaps continue to do so; but the time has come when the United States is no longer satisfied with the lowest place and is bound to rise above it.

(13) Office of Pub. Roads - Bulletin 32.

CHAPTER VII .

SUGGESTIONS FOR FUTURE LEGISLATION

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It will have become evident from the preceding chapters that the fundamental defect in the highway system of Minnesota is the lack of scientific and expert administration. Instead of economy and improvement there has been waste and decay. The roads in general, with the exception of a few recent improvements, are little better than they were at the time of the Civil War. It is estimated that over \$500,000,000 are wasted in the United States every year on account of bad roads. ⁽¹⁾ Of this enormous amount the share of Minnesota is placed at close to \$8,000,000. ⁽²⁾ A Highway Commission has been introduced, to be sure, but even that is made up of men without any special training for their position, who, however honest and well-meaning and industrious they may be, are not experts and specialists. Minnesota is just in the

- (1) Clive Day: Hist. of Commerce - p. 292
(2) St. Highway Com. Minn. Bulletin No.4, p.8.

stage of transition from the old loose, unharmonious, and localized system to a new connected, unified, and centralized one. Until this stage is completely passed, the good-roads movement will continue to move, and the legislature will continue to legislate. Twenty years more, perhaps, will be required before the change is completed. If it comes then, well; but, if it comes earlier, much better.

Legislation is needed on a host of points, but only a few of them will be suggested here.

1. A State Highway Commission composed exclusively of competent engineers.
2. County and township commissions appointed by and directly responsible to the State Commission.
3. A scientific classification of all roads into state, county, and township roads - each class to be maintained by the civil unit whose name it bears.
4. The abolition of all labor taxes, and the payment of all road-taxes in money.

5. The universal use of the contract system.
6. The abolition of all officers of road overseers locally selected.
7. The introduction of a system of continual road-repair.
8. A requirement that all heavy loads be hauled on vehicles with tires at least six inches wide.
9. A Laboratory in connection with the University for testing and experimenting on the road-materials of the state.
10. An amendment to section 16, article 9, of the constitution, striking out all of that portion which limits the legislature in its power to levy taxes for the State Road and Bridge Fund and which regulates the distribution of said fund among the counties.
11. The planting of suitable trees along the highways.
12. The inclusion, ultimately, of railroads in the class of state roads, or, better still, in a new class of national roads.

13. The imposition upon the Highway Commission of such duties and powers as will best enable it to improve and perfect the highways of the state.

When all this has been done, and it is bound to come, even proud France will have to bow her head humbly and yield her cherished place to Minnesota.

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This little investigation will have seemed well worth while if from it one single ray of light flares up to suggest a better way of perfecting the thousands of elementary paths of commerce which lead from the bountiful fields of nature to the great highways of steel and of brine, or if one only truth is so revealed as to give a new impetus to the natural tendencies of improvement and advance in the system of common roads - in other words, if there results from it one wee bit of influence for the good of humanity as a world society or as a small local group.

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