

## THE PROFIT OF GOOD COUNTRY ROADS.

I WRITE of the American common road. If you will examine a detail map of any important county within the United States, you will be likely to be impressed first by the great number of intersecting roads which seem to be spread like a huge network over all the accessible land of the county, and which all lead, with more or less directness, to the market-towns and to the larger channels of trade. If you will then take the trouble to measure the length of these roads by means of the printed scale, you will develop some surprise with the progress of your work, for your column of mile totals will soon run from tens into hundreds, and not unlikely into thousands; while your study, if pursued to further fields, will soon show you that the common roads in either of many counties exceed in length the aggregate mileage of all the railroads in the State, and that three of our States can be easily selected in which the total length of public roads, exclusive of town and city streets, is greater than the combined mileage of all the railroads in the world.

If you will travel one of these roads, going out as near as may be in a radial direction from the market-town, you will be interested in noting the gradations of thrift from good to bad as your journey proceeds. Leaving the town limits there will first appear the comely homes, and kindred evidences of comfort, which commonly belong to the suburban farmer. The market is just beyond his door-yard, and no condition can be imagined so calamitous as to sever the industrial value of his location. A distance of two or three miles will lead you to a more scattered population, living in homely and more secluded structures, and, in spite of their evident sobriety and industry, surrounded by certain signs of unrequited toil; while the further progress of your journey will introduce you in due time, and with tolerable certainty, to a region of hovels and abandoned farms. Wherever you go, the rule is much the same; and it is no exaggeration to say, that with the enlargement of concentric circles surrounding every American inland town is to be found an apparently undue diminution of agricultural population, wealth, and thrift. I used the word "undue" with deliberative purpose; for I believe it will never be as-

sented that the factor of distance can be wholly eliminated in rating the relative value of separate farms, or in determining the social and industrial advantages of their separate owners.

But from the industrial standpoint, at least, distance, in this advanced year of grace, can no longer be fairly measured in miles and leagues. We have gone beyond all that. London is nearer to New York than was Buffalo sixty years ago. We exchange goods with California every hour of the day; talk with our friends in Europe in less time than it takes to write and post a letter; ride twenty miles by rail to business in the morning, and home by the same route at night; travel more miles, and accomplish more business, in a day, than was possible for our grandfathers to do in a month; and have no regrets, except for those few things which have to be left undone for lack of time. To accomplish all this we have directed the national hand, and loosened the national purse-strings, to the encouragement of improved industrial methods, to the establishment of great commercial and mechanical centres, and, in certain directions, to the aid of enlarged and quickened means of transportation; we have pledged the public credit, granted public lands, and passed laws—general and special—to ameliorate the risks of capital, and insure the construction of railroads; and we have spent hundreds of millions of the public money to deepen our rivers and harbors, and provide ample outlets for the accumulating inland trade. In all these things we have adhered to a beneficent principle of statesmanship; and yet it must be admitted that these governmental acts were not commonly inspired so much by the economic motives of the statesman as by the dogged insistence of capital upon its claim to government aid. Their projectors have looked forever to the main chance; and so we find that the splendid advantages of these railroads and telegraphs, and all the great inventions of commercial and mechanical value, are held as private property, and bestowed for the use of the public only at comfortable market-rates. They represent, to be sure, a kind—and by all odds the most common kind—of national thrift, but a thrift, nevertheless, which owes its prominence to the individual wealth of the citizen and to the countless industries erected and displayed for the advancement of personal ends. They are no sooner exempt from the need of paternal aid than they assert their position beyond the pale of community ownership, shrink from the touch of public institutions, and assume the national phase only in a reflective and uncertain way: in a word, they are no part of the public property.

In viewing the results which seem to have inured to the nation through all these time-saving and distance-shortening improvements, it appears impossible not to observe that their benefits are bestowed in a somewhat one-sided and inequitable way. Directed by the besetting motive of self-interest, they have sought patronage in the great centres of population, and erected markets where thrift and money have called them into demand as needed adjuncts of competitive trade. They have saved time, lightened labor, and abridged distance, in all the operations of the banker, the merchant, the manufacturer, and the followers of the learned professions, and have developed monopolistic features in some degree commensurate with the centralizing tendency of population, capital, and trade. Their benefits to the farmer, while vastly important in themselves, have not, from a relative standpoint at least, tended either to allay his complaint, or to enhance his industrial condition. Indeed, they do not seem to have quite reached the farmer nor the farm; for, alas! the distance to the American farm, like the distance to sun and moon and the inaccessible stars, is still measured in miles and leagues.

Meanwhile what of the dirt road, that only avenue of communication which connects the farmer socially and commercially with the world at large? It is the same road that was used a hundred centuries ago by the naked savage when chased by a storm to the sheltering cave, and from him it seems to have descended as an entailed legacy to the American government. In all these years it has not changed, except that the modern article is more or less churned and mangled by narrow wheel-tires, and flanked by costly and useless fences,—two species of property unknown to our primitive ancestor, and first conceived at that later period which marked the dividing line between instinct and imbecility. Measuring a million miles or more in its various ramifications, dissolving in the rains of April, baking and pulverizing beneath the rays of the midsummer sun, drifting and disappearing in the whirlwinds of November, and presenting at all times but little more than a roughened streak of soil to serve as a land highway for the great volume of internal traffic, the time seems to have come when the American common road may rightfully assert itself as the most expensive, and by all odds the most extravagantly maintained, of all the public institutions. To the intelligent foreigner who comes to our shores, the American “system” of road maintenance is little short of ridiculous: to the thoughtful and inquiring native, it is only a kind of legalized negligence, a relic of feudalism borrowed

from England in the old days of governmental poverty, and placed in the keeping of the most patient and long-suffering of our industrial classes, who have been gradually led by "the ensnaring wiles of custom" to endure and to embrace it. What are the pecuniary benefits of good roads? It is a national question; for these roads are the common care and property of all the people, and any effect which grows out of their improvement must be found directly in the economic condition of the persons and property within their widened influence.

No great country can afford to neglect its farmers, or to abandon any reasonable measure by which the encouragement of agriculture is likely to be insured. Yet agriculture within the United States, if not actually declining, has certainly witnessed a long season of depression, and has been nowhere spurred to the same conditions of increase and thrift that have marked so many industries in the cities and towns. To them are accorded all the improvements of the age,—improvements conceived in self-interest, wrought by capital, labelled with a price, and displayed in the marts of huckstering trade. To them the common road appears to be of remote concern. They send and receive by the canals, the railroads, and the steamships; and their finished and refined products are carried a thousand miles at less price per ton than it costs the farmer to move the same weight of crude material from his farm to the nearest local market. Institute any comparison you will, and it seems bound to appear that—in spite of his intelligence, toil, and sobriety, and in the face of an increased consumption and growing market—the American farmer is badly handicapped in his industrial race with other branches of society. From an economic outlook, the result has not been inspiring. In the great State of New York, where the value of farm-crops was exceeded last year by those of only two States in the entire Union, the disproportion between the wealth of country and town has become so marked, that the officially estimated value of farm-lands last year was less than eight per cent, and that of the incorporated cities and villages more than ninety-two per cent, of the total taxable values within the State. The list of abandoned farms in many States is growing to such length as to excite public comment, and invite official inquiry. A few days ago Governor Campbell of Ohio, in a public address to the farmers at Marysville, declared that the farms of that State had decreased in market-value by at least \$220,000,000 in the last ten years, although the official census reports record an increase of the

aggregate wealth of Ohio during the same period, amounting to \$243,000,000; thus showing an apparent gain of \$463,000,000 in municipal values as against the immense depreciation of farm-values just noted. The population of not a few of our agricultural districts has actually decreased within the last ten years, while the mortgage indebtedness of American farms is accumulating at the rate of \$8,500,000 per year. Everywhere in the country the comparative downward tendency of small home farms has been complained of from time to time. "When every rood of ground maintains its man," has not seemed to be hopefully permanent. Witness the following table, showing the number of farms of different sizes in 1870 and in 1880:—

SIZE IN ACRES.	NUMBER OF FARMS.	
	In 1870.	In 1880.
Under 3.....	6,875	4,352
3 and under 10.....	172,031	134,889
10 " " 20.....	294,607	254,749
20 " " 50.....	847,614	781,474
50 " " 100.....	754,221	1,032,910
100 " " 500.....	565,054	1,695,983
500 " " 1,000.....	15,873	75,972
1,000 and over.....	3,720	23,578

These figures show a very substantial decrease, during the decade, of farms under 50 acres, while those having between 50 and 100 acres have increased in only about thirty-seven per cent. Going into the larger acreage, we find that the increase of farms having between 100 and 500 acres has been about threefold; those between 500 and 1,000 acres have increased fourfold; and those having over 1,000 acres were eight times more in 1880 than 1870. In 1883 over eighteen millions of acres were held by eight proprietors, while the great railway companies owned two hundred millions of acres.

It is of course no easy task to charge these sluggish conditions and shifting fortunes of agriculture to any certain cause; but, in searching for a solution, certain facts appear with such conspicuous prominence as to make them worthy of mention; viz., that with the same physical conditions, the same market, and unchanged prices of farm-produce, the American farm has in late years substantially declined in market-value; that the value of farm-produce in a given locality is, in general, determined by the price offered in the local market; that the farmer pays the same for all that he buys, and gets no more for what he sells, whether his farm be near or distant from the

market-town; that under these conditions the most immediate means of relief is to diminish the total cost of placing this produce in the market-town; that an amazing share of this cost is made up by the difficulties of wagon-road transportation, necessitating scant loads, long delays, mud blockades, break-downs, and extra trips; that these or similar hampering conditions are tolerated by no other industrial class within the nation; and, finally, that the quickening means for work, travel, and transportation adopted within and between the mercantile industries of the different towns, have added to the attractiveness and profits of these pursuits, and by force of contrast have detracted from the commercial value of neighboring farms.

But the public roads, though placed, for some obscure reason, within the immediate care of the farming population, have a paramount importance to the people at large, to whom, indeed, they in fact belong. The common road, unlike the magnificent railroads and the endless miles of telegraph, is an institution of the body politic, and it is a sorry comment to say that the government has thus far denied to the improvement of its public roads the same liberal and intelligent support that it has showered upon the schemes of private capital under the spurring importunities of an investors' lobby. The great volume of internal trade in every State is the common road trade. It exceeds by countless tons the entire freight tonnage of all the railroads combined; for besides this freight, which is at first carted in one form or another over the public road, there is a still greater quantity of produce of all kinds wheeled over these roads to fill the demands of the local market and to satisfy the requirements of home consumption. The cost of this form of transportation, be it great or small, is in the end paid, in part at least, by the consumer. What, in figures, is the volume of this trade?

In the present year our farmers will raise something over 3,200,000,000 bushels of grain (Indian corn, wheat, oats, barley, rye, and buckwheat), 46,000,000 tons of hay, 270,000 tons of tobacco, about 8,000,000 bales of cotton, and about 140,000,000 bushels of potatoes. To supply grains for the increased export demand produced by the shortage of European crops, we shall have a supply of about 200,000,000 bushels of wheat and 300,000,000 to 400,000,000 bushels of corn. Besides filling the local markets, we are hauling over our common roads enough produce, in one form or another, to supply a freighting business for 150,000 miles of railroads, using more than 1,000,000 freight-cars, and earning a traffic income in 1890 of nearly \$1,000,-



000,000, including the carriage receipts on nearly 700,000,000 tons of freight. The rapid industrial development of the South is a subject so often exploited as to be familiar to all, and it need only be attested here by the statement that the coal production of Alabama last year was something over 3,333,333 tons, an increase within the last decade of 946 per cent. It is clear that the movement of all these and a thousand other commodities of minor significance, necessitates a constant and constantly increasing use of the common road; and to the thoughtful observer it is likewise apparent, that in this use an incalculable loss is each year entailed upon the nation by the intermittent, yet always inferior, condition which these roads present.

As a nation, and as separate states, what are we waiting for? The time has certainly come when this subtle and too long unrecognized effect which our great network of dirt roads exerts upon the social and industrial character of the people should be made a subject of popular concern. We have been long exempt from international differences and from serious home contentions; the public debt has been reduced to an insignificant figure and the general credit made secure; State obligations in the aggregate have decreased by more than \$70,000,000 within the last decade, and are now less by \$50,000,000 than the available funds and assets held in the several State treasuries. Do we need the example of other nations? It is asserted that the military road of Marshal Wade had a greater civilizing effect among the people of the Scottish Highlands than the prior efforts of all the monarchs of Britain. In the early days of the English movement for reformed road-laws and better roads, the advantages of better methods were declared in a committee report in the House of Commons in these words:—

“By the improvement of our roads every branch of our agricultural, commercial, and manufacturing industry would be materially benefited. Every article brought to market would be diminished in price, and the number of horses would be so much reduced, that, by these and other retrenchments, the expense of five millions (pounds sterling) would be annually saved to the public. The expense of repairing roads, and the wear and tear of carriages and horses, would be essentially diminished; and thousands of acres, the produce of which is now wasted in feeding unnecessary horses, would be devoted to the production of food for man. In short, the public and private advantages which would result from effecting that great object, the improvement of our highways and turnpike roads, are incalculable.”

Adopting the spirit of this report, England and Wales, according to recent parliamentary returns, are spending upwards of £4,000,000

annually in their maintenance of an excellent system of macadamized roads; this sum being exclusive of expenses for similar purposes in the metropolitan district, where they amount to an additional sum of £280,000. France maintains an admirable system of highway management under direction of the General Government, and has to-day 130,000 miles of hard, smooth roads, kept up by a method of continuous repair, which has been shown to be the most effective as well as the most economical; while the sum of \$18,000,000 annually spent by the French Republic in the care of her common roads is productive of more immediate and substantial revenue—to say nothing of the insured contentment of the rural classes—than any other public fund devoted to economic ends. In Belgium, Baden, Hesse-Darmstadt, Italy, and other European states, the main roads have for years been made and maintained at the expense of the General Government, and millions of dollars are annually appropriated to insure their constant and systematic repair. At the end of long experience the testimony of these governments, as set forth in their official reports, is quite uniform in declaring high-class roads to be not only the best, but also the cheapest, when the aggregate expense of making and repairing is considered for a series of years, while in the light of public policy and governmental economy they are held to be fairly indispensable.

Do we require the result of experiments at home? Witness the splendid development of trade, the increase of land values and population, and the contented and prosperous condition, of the people of Union and Essex Counties, New Jersey, where these results are the conceded outcome of a new system of macadamized roads. In evidence of this fact, Mr. Charles C. McBride, a resident of Elizabeth, writing of the improved roads in Union County, says,—

“The costs and expenses of these magnificent roads are easily computed. The total outlay of the Board of Freeholders has been nearly three hundred and fifty thousand dollars, and there are now nearly forty miles of telford and macadam road in the county. The figures are not in excess of what was expected by those who had given the matter careful study, thus showing that the management of the financial part had been as discreet as the preparatory work.

“But the question will arise at once, Has this expense of nearly ten thousand dollars a mile proved wise, as well as beneficial? Good roads are, of course, good things; but do they pay? The answer may in part be found in the fact that the property in Union County has actually appreciated in value far more than the cost of the roads; and this not only in cases of sale or exchange, but upon the tax levy.

“Notwithstanding the fact that three hundred thousand dollars' worth of county bonds have been issued to build these roads, and the interest must be



met annually, the tax-rate has not been increased in the county, or in any city in the county, in consequence of the extra interest expense; and it is but fair to say that the actual appreciation of property due to the increased values of lands benefited by the improved roads meets the increased taxes already. And none of our roads has been completed for more than a year, while some parts of them only within the present month. As an advertising medium alone, they have been worth what they cost; for they have brought county property into enviable prominence, have already caused the sale of many residential sites, have brought new wealth and new enterprise in the midst of us, have given direct impetus to building and improvements in every city and town touched by them, and as yet the benefits are only beginning to be realized. It is safe to say that the citizens and tax-payers of Union County would not go permanently back to the old system with its old roads, if they were paid many times the cost of the new roads."

In Orange, N. J., in Parke County, Indiana, in some of the towns of Massachusetts, Rhode Island, and Connecticut, and in one or two isolated cases in the State of New York, where this class of improvement has been carried on, the testimony of Mr. McBride regarding the industrial value of improved roads has been repeatedly verified. It is impossible here to make extended reference to the results accruing from the improvement of the roads in these several localities, and it is sufficient to say that the limited experience of our own countrymen, like the more extended knowledge of the European road-maker, fully attests the commercial importance of high-class roads. The result of this experience, and the recurring importunities of trade and agriculture for better means of local transit, have roused in certain quarters a demand for improvement, and engaged the attention of not a few of the officers of the state and general governments.

Several of our State governors have made the subject of improved roads a matter of special mention in their communications to the legislative bodies of their several States, and in some cases have urged at length the passage of laws for the improvement of the main roads under direction of an efficient head, and at the expense of the State at large. For two successive years, a bill has been pending in the Legislature of New York, commonly known as the "Richardson Bill," which provides for the expenditure of ten millions of dollars for the construction of improved roads on important lines throughout the State, and directs that the money so expended shall be raised by general tax. It has twice passed the Senate, and was lost in the Assembly only by a most slender margin. In Pennsylvania, an act of the Legislature creating a special road commission to "revise and consolidate the laws relating to the construction and improvement of the

roads and public highways," etc., was approved by Governor Beaver in April, 1889; and the report of the commission so created was presented, with proposed roads improvement bills, to the Legislature in February of the present year. In Massachusetts, Ohio, Rhode Island, and several other States, similar activity has been noted in the halls of legislation, and the gradual tendency of the law-making bodies is manifestly in the direction of better and more practical road laws. Among the officers of the General Government at Washington, a similar interest in the improvement of American roads has been made apparent. In a recent annual report of the commissioner of agriculture, the necessity of better roads for the farmer and the merchant was set forth in most timely and emphatic language; and the Department of State has shown a corresponding interest by obtaining from the American consuls and ministers in foreign countries a series of special reports relating to the improved methods of road-building adopted by the several European states. I am advised by the public printer at Washington that these reports are now in press, and will soon be issued in the form of an illustrated and most interesting public document.

It would be unjust to a large class of our younger and more active citizens, not to mention here the splendid work and substantial success of that finely organized and well-equipped body of roads improvement agitators known as the "League of American Wheelmen." With a membership now approaching twenty-five thousand, and maintaining a national organization, as well as a separately organized division, within each of the important States, this league is spending thousands of dollars each year through the medium of its highway improvement committee, whose duties are directed to the collection and dissemination of printed matter calculated to arouse an interest in the improvement of the roads, and to encourage legislative action in the passage of amended road laws. It has placed itself in touch with every important source from which valuable facts and information seem to be attainable; it has sought out, recorded, and classified the names of all citizens in private and official life who have declared themselves in favor of better roads; and through thousands of newspapers, especially those most read in agricultural sections, it is publishing an endless variety of forceful arguments in furtherance of its work. It stands ready at all times to equip volunteer lecturers and speakers with such handbooks and printed information as will aid them to understand and explain the benefits of improved roads; and

the bountiful progress of its work is shown in the fact that the labors of its national committee have been quadrupled within the last six months.

Altogether, the signs are hopeful, and the future of the American road is full of promise. Let us rest in the confident belief, that by a unity of forces and a continuation of the work already so well in hand, the government and the states will be brought to adopt that beneficent principle of statecraft which leads a nation to rightly and fully exercise its paternal functions, and to direct the public hand to the aid and development of that great branch of industry which was born with the birth of the nation itself, and upon the success of which all national wealth must eventually depend.

ISAAC B. POTTER.

## AMERICAN SHIPBUILDING AND COMMERCIAL SUPREMACY.

DISCUSSION of the existing state of shipbuilding in the United States involves a survey of its history and the causes which have produced its vicissitudes.

At any time prior to 1861 our shipbuilding industry had simply kept pace with the demands of private commercial enterprise. The government had not been a customer of the private shipyards to any extent worth mentioning. Almost all naval vessels, prior to the civil war, were built in the navy-yards. In some cases, engines for steam men-of-war had been built in private shops, but as a rule these were simply engine-building establishments not connected with shipyards; and for that reason, and because the government suddenly stopped even this, it gave but little direct benefit to the industry of shipbuilding proper. During this period, it is needless to remark, the preponderance of shipping output in the United States was of wooden vessels, whether steam or sail; and at least up to 1860, notwithstanding the rapid growth of steam propulsion during the preceding two decades, the sailing tonnage still held the lead in amount, if not in importance.

These two decades, 1840 to 1860, were, moreover, the first half of the great transition period from wood to metal in ship construction; the last half of that period terminating, say, in 1880, when the building of wooden vessels, except for special and in the general sense of minor uses, was discontinued by all the great commercial nations. As early as 1840, England, which had for over two centuries held the first place as a shipbuilding and ship-owning power, found her home supply of timber exhausted. Even for many years prior to that date, more than half of the timber used in British shipyards had been imported,—teak from India, oak from the shores of the Baltic, from Spain, and from Africa, together with pine and oak from this country and from the Scandinavian Peninsula: in short, she had to depend on foreign lands for her supply of raw material—a situation necessarily incompatible with supremacy.

The fact that, as her supply of timber vanished, her production of