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The Genesis of Planking

The need for better means of transportation has been a continual challenge in the civilization of America. From Indian trails and "dugout" canoes to trans-continental airways is a long story with many stirring chapters. Each advance seems to have moved across the country from East to West, not, perhaps, as a continuous wave, but as great eddies, radiating outward from populous centers. From the Atlantic seaboard to the Mississippi River there has been a distinct time lag, amounting sometimes, as in the case of the railroads, to as much as twenty-five years.

By the middle of the nineteenth century, tremendous strides were being made in the development of all forms of transportation then known. Rivers and canals vied with turnpikes and national roads as main-travelled routes, and the iron horse was beginning to make its influence felt. Not, however, until the decade following the Civil

War did the great age of railroad expansion begin. Then, for more than half a century, this form of transportation expanded so rapidly that it almost crowded out other competitive methods.

Prior to the advent of railroads, the marketing of farm products was especially difficult. Hauling grain over dirt roads was expensive. As much as fifty cents per hundred weight was charged for twenty miles. Corn, even disregarding the costs of production, could not ordinarily be moved more than twenty-five or thirty miles on the highways and sold at a profit. At the beginning of the nineteenth century, it is said that ginseng was the only product that could be grown in Kentucky, then the most populous State in the West, transported to Philadelphia, and sold for enough to pay for the hauling. At a time when three-fourths of the country's population were farmers, clamoring for a market, cheaper and better forms of transportation were absolutely essential.

The supremacy of the "rails" was recognized and opposed by other transportation interests, which sought in every possible manner to check the intrusion of this ruthless competitor into their particular fields of operation. One of the principal advantages of the railroad over the turnpike was the fact that it was an "all weather road". When highway transportation was at a standstill on ac-

count of storms and mud, transportation by rail was practically uninterrupted. The obvious advantage was apparent to all. Those most interested in the continuance of the existing stage lines thought that, if the delays incurred by inclement weather could be overcome, they might, for a time at least, stem the tide of public favor which was rapidly swinging toward the railroads.

Two methods of highway improvement were found to be feasible. In fact, in modified forms, both had been employed for centuries in various parts of the world. The first was the construction of stone-surfaced roads, a notable example being those built by the Romans, which, it is said, to this day have probably never been surpassed either for excellence or durability. The second kind of hard surfacing was with wood. As a temporary expedient this method had been widely and frequently used, especially in swampy places.

Innumerable stretches of old "corduroy" roads were built, not only throughout the settled portions of the country, but in sparsely populated regions as well. In the construction of "corduroy" roads, the most primitive methods were often used. Small logs or tree trunks were simply laid crosswise of the road over swampy places. They furnished a solid foundation, thus preventing animals and vehicles from sinking down deep into the mud.

In some instances the surface of these roads was greatly improved by splitting the logs, laying them flat side upward, and fastening them in place by overlying stringers secured along each side of the road with stakes driven into the ground.

The coming of the power sawmill, which followed the advance of civilization throughout the middle west, made possible a distinct improvement in the construction of wood-surfaced highways. Smooth, sawed planks took the place of the round or split logs. Whereas the old "corduroy" highway fully justified its name, being decidedly more utilitarian than comfortable, the newly devised "plank road", with its smooth, even surface, seemed like perfection in comparison. Plank roads reached the peak of their development in the United States during the decade between 1840 and 1850. Thereafter they experienced a rapid decline in popularity.

Plank roads were built upon an earth embankment or grade about thirty feet in width along a predetermined right of way. Usually ditches were constructed on both sides for drainage. Where valleys and ravines were crossed, earthworks or fills of considerable magnitude were sometimes necessary. Stream beds and ditches were spanned by substantial bridges, and a high type of engineering ability and ingenuity was

often displayed in the construction of these trestles which, of course, were usually made entirely of wood, although occasionally stone was employed for an arch or culvert. Concrete, structural steel, and iron bridges now so common were then not even in the experimental stage.

The road surface proper, when built according to standard specifications generally accepted at that time, was formed by three-inch planks, eight feet in length, laid transversely to longitudinal sleepers which were imbedded in the earth road base. The dimensions of the sleepers were about six by eight inches and the usual arrangement was to place one on each side of the roadway, although it is said that upon some of the better construction a third was laid down the center.

The question of employing or not employing nether stringers seemed to be a point of considerable controversy. "The use of large stringers beneath is also an error", declared the *Prairie Farmer* in 1851. "The plank ought to rest on the earth for their support. Stringers are only useful in keeping the plank from turning; which, especially at first, they are liable to do, while the earth beneath is soft. There should be no impediment to the compact and snug bedding down of the whole superstructure of the road."

The width of the surfacing plank was not nec-

essarily uniform, being determined by the size of the logs from which it was sawed. Six inches was usually the minimum width, and from ten to fourteen inches the maximum. The kind of plank depended largely upon the variety of timber available in the vicinity of the proposed highway. In some regions hemlock and other soft woods were used, but generally throughout the middle west only superior woods were utilized. Devastating inroads were made upon the finest stands of oak and walnut timber. Ordinarily the planks were fastened to the sleepers by means of iron spikes which were of the square, hand-wrought variety. When these were not available, wooden pins or even stakes were sometimes used.

Hundreds of miles of these roads were built during the heyday of their popularity. The *Muscatine Journal* on February 7, 1852, stated that as many as seven plank roads had been built out of Detroit, connecting that city with the interior. Their aggregate length was one hundred and eighty-eight miles, and their average cost about \$1500 per mile. "Milwaukee has six plank roads in process of construction and about one hundred miles completed."

In Illinois the movement became almost statewide. Plank roads radiated from almost every important town. The first "planking" was laid in

Chicago during the summer of 1843, and according to contemporary news reports it was still good, "showing scarcely any wear", in 1851. In 1849, a general "Plank Road Corporation Act" was passed by the State legislature, whereby companies might be readily formed for the purpose of constructing and managing plank roads. Previous to this, special charters were granted for individual roads, three of which — the "Northwestern", the "Western", and the "Southwestern" — extended outward from Chicago. These roads stretching westward toward Iowa, were of considerable interest to the people of this Commonwealth, as they formed an important link in the overland route to the region beyond the Mississippi. Thousands of early settlers and immigrants came that way.

Of these three, the first to be constructed was the "Southwestern" road, which followed approximately the present route of Ogden Avenue. It was begun in May, 1848, and by 1850 sixteen miles had been completed, reaching Brush Hill on the eastern boundary of Du Page County. As extensions to this road, the "Naperville and Oswego", the "St. Charles and Warrenville", the "Sycamore", and the "Oswego and Little Rock" roads were built, thus making a continuous line of plank roads leading out from Chicago for a dis-

tance of sixty miles. These roads formed the main line which, together with the branch roads connecting it with small towns, made a network of improved roads in the section of country lying southwest of Chicago.

Supplementing the roads in this section, another company of interest to Iowans was organized under the name of the "Oswego and Indiana Plank Road Company", which proposed to build a "Plank drive" from Oswego, through Plainfield and Joliet to the Indiana State line. This would provide immigrants from the east with a more direct and convenient route to the west. A link in this highway was actually constructed, between Joliet and Plainfield, which remained in operation until March 15, 1869, when it was closed, resulting in a "complete financial failure". Those who had invested in it lost everything as was usually the case in most other ventures of like character.

A similar network of roads extended to the west and northwest of Chicago. In 1849 the "Northwestern" plank road company, following the route of Milwaukee Avenue, began building to Oak Ridge, a distance of eight miles, and the next year the road was completed to Dutchman's Point. From this main line various feeders were thrown out to the Des Plaines River. The principal objective of this route was to form a connection with

the important trading center of Wheeling and, by branch roads, to "secure for Chicago the surplus products of the entire Des Plaines Valley."

Connecting with the "Northwestern" road at Oak Ridge was the "Western" plank road, running westward to the east line of Du Page County where it joined the "Elgin and Geneva Plank Road", which ran through Elgin and terminated at Geneva, more than fifty miles distant from Chicago.

Thus it will be seen that by the time the plank-road fever struck Iowa, about 1850, such highways were not entirely an untried venture. On the contrary, the technique of plank-road construction was well advanced. The advantages of hard, smooth-surfaced highways were obvious. Moreover, several years use had demonstrated the practicability of planking immigrant and farm-to-market routes.

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