ENGINEERING

Transportation

Visitors Travelling Across the Continent to Fairs Will See How Earlier Americans Made Such Trips

By ROBERT D. POTTER

TWO great fairs, one at each side of the continent, present transportation problems of moving one of the largest mass migrations of the American public since the World War.

By motor, train, airplane and ship millions of people will travel hundreds of millions of miles to see these two wonder exhibits of 1939. Most of them, on all-too-brief vacations, must travel far and fast. It is modern transportation which has made these two fairs possible, transportation that is a far cry from the slow, uncertain and rough modes of transport of a century ago.

From the first huffing and puffing steam engines of 1839 to the modern speeding streamliners of the modern railroad; from the trudging hoofs of horse and mule to the swift comforts of modern bus and motor vehicle; from slow sailing ships to today's speeding steamships and from nothing in aerial transport to the gleaming swift-flying airliners of the present. These are only a few of the sharp contrasts in a century of transportation.

With the exception of the air the growth of transport by rail, water and road has had the most fundamental part in molding the United States into the nation it is today.

The early 13 states possessed territories west of the Alleghanies which, at one time, offered a serious challenge to Washington and other early leaders. They saw that the seaboard states might lose control of these "western" lands if something was not done about transportation.

To this end the nation built its great turnpike west from Baltimore to Wheeling, W. Va., where it was possible to tap the waterway network of the Ohio River Basin and thus reach the still-uncolonized lands.

Lumbering Conestoga wagons — the same "covered-wagon" type which later served the pioneers of the far west so nobly in their trek across the great plains and mountains to the west coast—hauled freight over the Alleghany Mountains on this national highway. World's Fair visitors to New York will see such wagons and other historic transportation exhibits when they stop by the New York Museum of Science and Industry in Rockefeller Center.

The National Turnpike might—if invention had been slower in those early days—have marked the first link in a great chain of really fine highways throughout the nation such as are found in France, England and Italy as their heritage from the past.

But America was growing during an inventive age. Even while the National Turnpike westward was reaping profits for trucking and passenger agents its economic supremacy was being buried by dirt tossed from shovels hundreds of miles away in New York State.

There the Erie Canal was slowly worming its way through the state and, when opened, marked the easiest and cheapest way to ship goods over the great distances.

Soon the Erie Canal—maker of cities like Utica, Syracuse and Buffalo—was to have its competition with the railroads but, in the meantime, water traffic surged westward through the Ohio, the Mississippi and the Missouri and their tributaries.

More than any other form of transport the railroads brought economic life to the nation. The growth of the west, in fact, is intimately linked with railroads which suffered few barriers of geography—as did waterways—and drove straight to their goals whatever and wherever they might be.

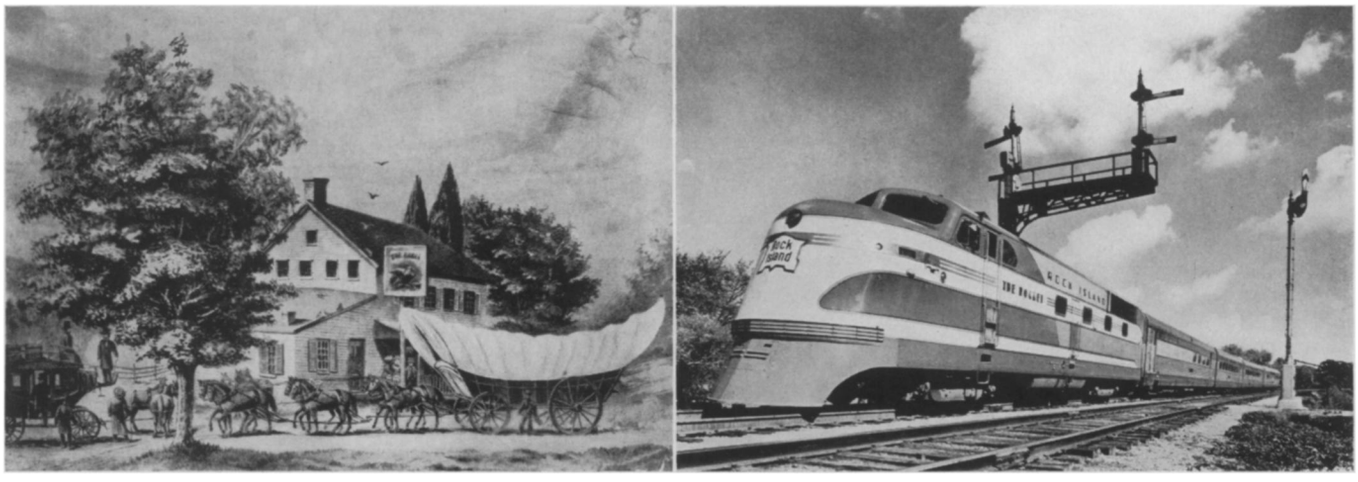
In ten years—when the railroads came —such a city as Kansas City jumped from 3,000 to 37,000 in population. Denver in two decades grew from 5,000 to 107,000 and Omaha jumped from 16,000 to 140,000 between 1870 and 1890.

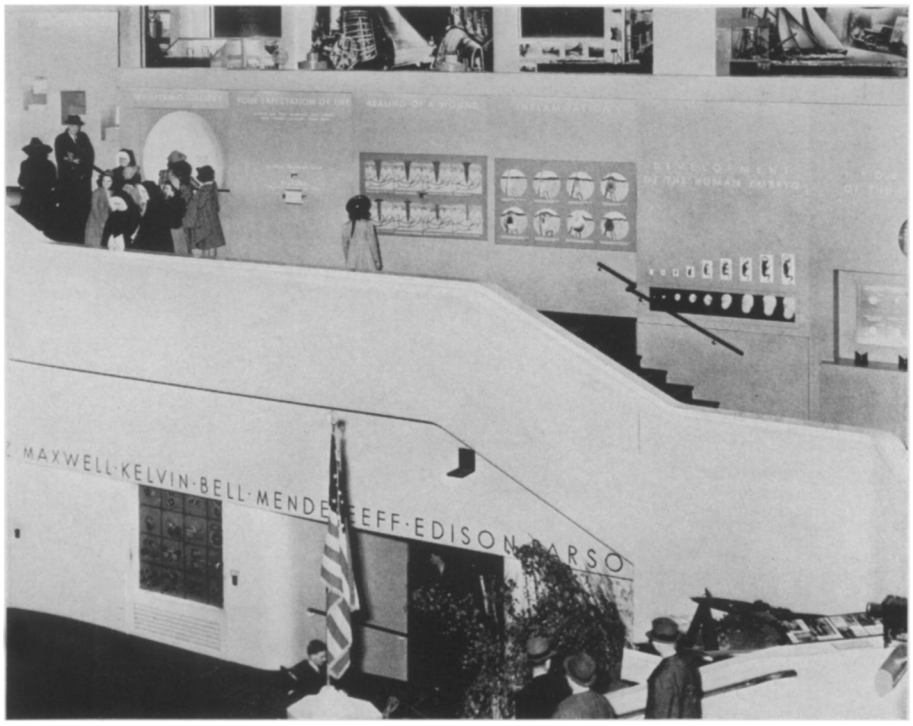
In the east, cities left behind by canal and waterway systems backed the railroads to recoup their economic losses. Thus the city of Baltimore bought $500,000 dollars of Baltimore and Ohio stock and again tapped the freight sources of the west.

Journeys that took weeks and even months by other methods could be trav-

CONTRAST

A single century has seen progress in transportation from the covered wagon of pioneer days to the ultra-modern streamlined train.





MUSEUM OF SCIENCE AND INDUSTRY

elled in only days behind the steam locomotives and as the mass freight and passenger carriers of the nation the railroads came into the dominant position never since relinquished.

But with the turn of the century a new way of creating power and using it was slowly evolving in Europe. This new invention—the internal combustion engine—made possible first the automobile and then the airplane.

In the broad view the automobile put the emphasis on travel back where it mainly was a century ago—in the hands of the individual. Only it cut the confines of time and space tremendously.

In the early days of "automobiling" the new enthusiasts longed for a national network of good highways like the National Turnpike to Wheeling and the west. War and commerce have ever been the motives behind good roads and in America the growth of the railroads and waterway system took away the motive for a century. Thus in 1904 the nation had over 2,000,000 miles of roads but only a mere fraction suitable for the "new horseless carriage."

So swift has been the growth of the motor vehicle for private and public use that today there are more than 3,000,000 miles of roadways in the United States and nearly 400,000 miles of them are so surfaced that they can be travelled in any weather.

Just as the railroads created new cities in boom days, so has the automobile aided the growth of new towns and communities and—perhaps even more important—permitted existing cities to expand and, in some measure, gain new freedom from the previous hampering confines of less mobile transportation.

The New York Museum of Science and Industry's display of historic motor cars which have pioneered in this liberation of city crowding will attract many a visitor at the World's Fair there.

While the Fords, Olds, Duryeas, Wintons and Haynes of the nation were evolving their putt-putting converted buggies into what has become today's motor cars, the Wright Brothers were putting a compact little engine into their version of a glider and making it fly through the air.

From flights of 120 feet the airplane has surged onward to flights over all oceans and all continents; air speeds have risen from 40 miles an hour to over 200 miles an hour for commercial transports with military planes 200 miles an hour faster.

The end effect of the airplane on the national picture is still much in the future but its effect in the international field is manifest today in the aerial war threats which are intimately bound up with current war scares in Europe.