The Burlington Presidency

As executive vice-president and then president of the Great Northern, Budd had been a director of the Chicago, Burlington & Quincy since 1916. Consequently he was thoroughly familiar with the property and problems of the vast system that linked Chicago with the Twin Cities, Denver, and Kansas City, and, through its subsidiaries (the Colorado & Southern and Fort Worth & Denver City), with Amarillo, Fort Worth, Dallas, Houston, and Galveston. Actually the C.B.&Q. alone was and is longer than either of the companies that own it; in 1932 it operated 9,262 miles of road as compared with 8,409 for the Great Northern and 6,736 for the Northern Pacific. In addition, the C.B.&Q. controlled, as it does today, the Colorado & Southern and the Fort Worth & Denver City which then had a combined mileage of 2,052, making a total of 11,314 for the Burlington Lines. As of 1932, freight tonnage moved by the Burlington System slightly exceeded the combined total of that moved by the Great Northern and Northern Pacific; Burlington Lines' gross revenues in that year were over half again as much as for the Great Northern, and almost double that of the Northern Pacific. Thus, when Ralph Budd be-

came president of the Burlington Lines on January 1, 1932, he was stepping into an even more responsible and more powerful position than he held as president of the Great Northern.

The condition of the Burlington in 1932, however, was a challenge indeed. From its very earliest days, the railroad had been extraordinarily prosperous. Throughout its first half century it was carefully and conservatively managed by John Murray Forbes of Boston and his associates. As a member of the so-called Hill Lines since 1901, it had not only maintained its earlier traditions, but benefited by the guidance of one of the most efficient managerial groups in the country. Furthermore, the system occupied a territory that supplied extremely well-balanced traffic; it served the heart of the corn and wheat area, linked the major manufacturing and distributing centers of the Midwest, and was well placed to receive a steady flow of coal and lumber traffic. On the other hand, as a "Granger road" it was peculiarly sensitive to agricultural depression. When Budd arrived, the Burlington Lines' freight revenues of over one hundred twenty-seven million dollars in 1930 were on their way down to seventy-three million in 1932. Budd rolled up his sleeves and went to work.

The very first thing he did was to reduce the number of operating divisions from seventeen to eleven, thus simplifying administration. Mean-

while he turned his eyes to the western end of the system where, it seemed to him, the road was missing a golden opportunity.

Ever since 1882 the Burlington had been the short route between Chicago and Denver. This splendid main line of over a thousand miles was obviously one of the greatest potential earners on the system. Yet the Burlington's share of through traffic moving between Chicago and the West Coast via Denver was pitifully small. The reason was obvious: the essential link between Denver and Salt Lake City (where connection could be made with both the Western Pacific and the Southern Pacific) was the Denver & Rio Grande Western which, from Denver, first went south to Colorado Springs where it interchanged traffic with the Rock Island, then further south to Pueblo where it interchanged traffic with the Missouri Pacific. Only there did it turn westward over the mountains toward Salt Lake City. Since the Rio Grande received the same rate on through traffic whether picked up at Denver, Colorado Springs, or Pueblo, that company naturally favored traffic which it had to haul for the least distance, namely that of the Missouri Pacific, with the Rock Island next in order. The Burlington ran a very poor third. Budd's problem was to figure out a way by which the Burlington could attract a really substantial share of this transcontinental movement.

At first glance the situation seemed hopeless,

but there was a simple solution. In 1928 the Denver & Salt Lake Railroad, which ran directly west from Denver, had completed the six mile Moffatt Tunnel through the Rockies. On the other side of the mountains the line continued due west as far as Orestod before it veered northward toward Steamboat Springs and Craig. Yet Orestod was only some forty miles from the main line of the Rio Grande at Dotsero between Pueblo and Salt Lake City. If that gap could be filled it would shorten the combined Denver & Salt Lake-Denver & Rio Grande line between Denver and Salt Lake by one hundred seventy-five miles, as well as provide a route with a maximum grade of 2% as against the 3% eastbound grade by way of Pueblo and over Tennessee Pass. So far as the Rio Grande was concerned, construction of a cutoff would mean that Denver would be closer to Salt Lake than either Colorado Springs or Pueblo, and that therefore the Rio Grande would have to haul traffic to and from the Burlington over a less distance than traffic to or from either the Rock Island or the Missouri Pacific.

But how could the Rio Grande be induced to construct this cutoff? At that time it was controlled equally by the Western Pacific and the Missouri Pacific. There seemed little likelihood that the latter interests would permit the Rio Grande to short-circuit their own transcontinental route.

RALPH BUDD: RAILROAD MAN

Courtesy Great Northern, and Burlington

At the left Ralph Budd (standing) shakes hands on January 1, 1932, with William P. Kenney, his successor as president of the Great Northern Railway. Budd became president of the Burlington Lines, where he is pictured in 1948 standing in front of the *Zephyr* streamliners that he made famous.

Courtesy Burlington Lines

Around 1940 the builders of the Burlington's famous *Pioneer Zephyr* discussed the far-reaching results of that experiment. Left to right: H. L. Hamilton, president of the Electro-Motive Corporation, Ralph Budd, president of the Burlington Lines, and Edward G. Budd, president of the E. G. Budd Company.

RALPH BUDD'S CLASS PICTURE IN 1885

Courtesy Miss Helen U. Budd

The students of District 8, Orange Township, Black Hawk County, in the summer of 1885. Seated in front, Olive Budd, left, Effie Shaulis, right. First row, left to right: Helen Budd, Alice Shaulis, Rhoda Dane, Mathilda Gibson (the teacher), Ralph Budd, Elsie Dane, and Mildred Dane. Second row, left to right: Roger Stoy, Esther Budd, Lottie Shaulis, Fred Dane, Effie

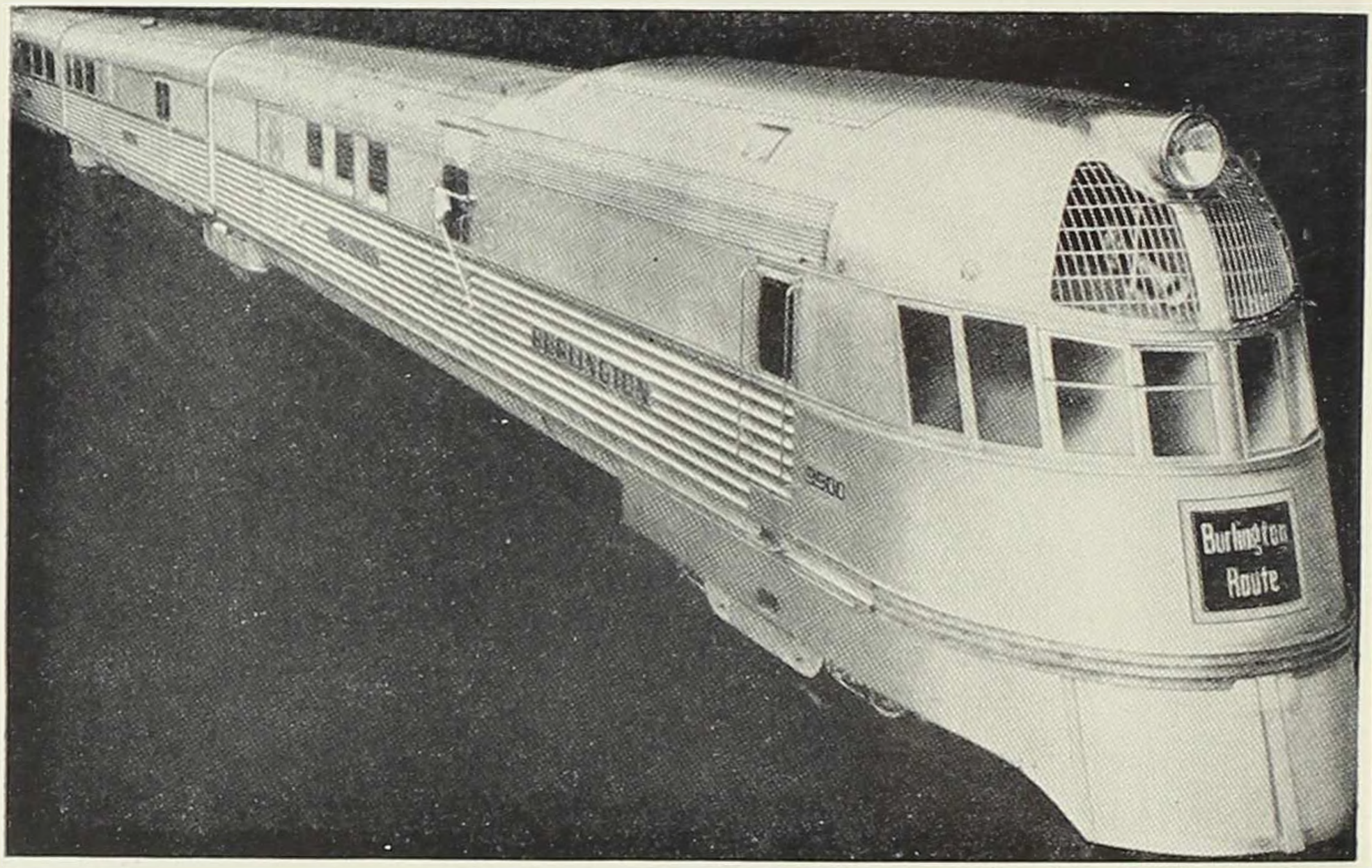
left, Effie Shaulis, right. First row, left to right: Helen Budd, Alice Shaulis, Rhoda Dane, Mathilda Gibson (the teacher), Ralph Budd, Elsie Dane, and Mildred Dane. Second row, left to right: Roger Stoy, Esther Budd, Lottie Shaulis, Fred Dane, Effie Roberts, Albert Dane, and Charles Dane.

THE BUDD FAMILY IN 1902

Courtesy Miss Helen U. Budd

This family portrait was taken in Des Moines on July 3, 1902. Seated, from left to right, are Esther, Mrs. Mary Ann Budd, Beulah, Mr. Charles Wesley Budd, and Helen. Standing, from left to right, are James, John, and Ralph.

TWO OF RALPH BUDD'S INNOVATIONS



Courtesy Burlington Lines

The original Burlington *Zephyr* which inaugurated a new age in railroad history when it sped from Denver to Chicago on May 26, 1934, in thirteen hours and five minutes.

Courtesy Burlington Lines

Another first for the Burlington during Ralph Budd's administration was the introduction of the dome car in 1945, greatly adding to the pleasure of passengers in scenic regions.

As it happened, however, the man who effectively controlled the Western Pacific was Arthur Curtiss James. He was also a director of the Burlington, and had long been a close friend of Ralph Budd and a vigorous supporter of the Great Northern. Consequently he shared Budd's earnest desire to develop Denver as a gateway for Rio Grande-Burlington traffic. So it was that from the moment Budd became president of the Burlington, he sought James' aid in forcing construction of the cutoff. James was willing enough, but could hardly find fault with the perfectly reasonable improvements the Rio Grande was making on its existing main line. It was Budd who finally provided the answer. "I've been most of my life on a railroad that is either owned equally by two other railroads, or on one that owns equally some railroads," he told James, "and I've learned that one party in such a deal can stop improvement work, but it takes two of them to go ahead and do it."

James immediately grasped the point. Without criticizing what the Rio Grande was doing on its Pueblo Line, he simply insisted that equal consideration be given to the cutoff. At first it was objected that the terrain to be covered was so rugged that construction was virtually impossible. But the maps and profiles showed that the line was, as Budd put it, "just an ordinary Rocky Mountain canyon route," not nearly so rugged as

the Deschutes Canyon and not approaching in difficulties the Feather River Canyon. Work began almost at once, and in 1934 the Dotsero Cut-off was completed and put into service.

Within the next few years the Burlington's transcontinental business through Denver quadrupled. Whereas Denver had previously been ranked behind Chicago, Kansas City, the Twin Cities, St. Louis, and even Billings as an interchange point, it moved by 1942 into the number three position, and at times threatened even Kansas City for second place. There was perhaps no better indication of the new importance of the Denver gateway than the fact that the Rock Island shifted its interchange from Colorado Springs to Denver. Incidentally, the opening of the Denver gateway for transcontinental traffic proved to be an enormous boon in World War II; had the short line not been in existence, the total defense effort would have been seriously handicapped.

Without any doubt Budd's most important achievement while on the Burlington, and indeed over the course of his long career, was the inauguration of the first streamlined train to be powered by a Diesel-electric locomotive. Perhaps no major innovation, unless it were the development of the electric light, has been so much the product of one man's imagination and courage.

No one knew better than Ralph Budd that the

railroads' profits came from freight, hence everything possible was done to increase freight traffic and to handle it at low cost. The passenger business, however, presented a serious problem on account of its steady decline and the great difficulty encountered in reducing service when the traffic failed to support it. Budd's idea was to attract passenger travel by faster and better service and at the same time reduce the cost of service. To that end, a light-weight high-speed streamlined train was proposed.

The best people to build such a train, he reasoned, were those who had already gained some experience in light-weight body construction in the automotive field; the old established railway car builders were still too wedded to the theory of massive weight and traditional design. So it was that early in 1933 the Burlington ordered from the Edward G. Budd Company in Philadelphia a 3-car stainless steel train to be built along aerodynamic lines, to weigh less than 170,000 pounds, and to have a total seating capacity of seventy. Its cost was estimated at approximately $200,000.

As yet, however, it had not been decided how to power the new train. The Union Pacific, which was also building a streamliner, had settled upon a gas distillate engine, a precedent that the Burlington might have followed. But as one historian of the Diesel has put it, "Budd was ready for something new." He turned to the Electro-Motive

Corporation, and at Cleveland was shown two eight-cylinder Diesels then being constructed for exhibition at the Chicago Fair. With the superb performance of the Cascade Tunnel Diesels fresh in his mind, Budd felt he was on the right track. As soon as the engines were installed, he watched and checked their performance with an eagle eye.

The job those engines were doing, of course. was a far cry from the demands that would be put on them in locomotive service. But Budd decided they could be adapted to provide power for a train. At first Electro-Motive officers were dubious, but they well realized what a revolutionary advance could be made if the experiment worked; they accepted the order, and challenge, that Budd gave them in mid-June, 1933. "Thus it happened," wrote an Electro-Motive spokesman some years later, "that a railroad president forced the issue and speeded the acceptance of Diesel motive power for the nation's railroads."

The *Pioneer Zephyr* was delivered to the Burlington in Philadelphia on April 7, 1934. On its first trial trip it reached a speed of 104 miles an hour, and thereupon set out for a tour of the country where thousands flocked to see it. The event that startled the nation, however, was this little train's non-stop run from Denver to Chicago on May 26, 1934. Probably no single comparable event in modern times has had more advance publicity and at the same time less experience on which

to predicate a successful outcome. Budd's proposal was daring to say the least; his idea was to leave Denver at dawn and, without a single stop, run the *Zephyr* on to the stage of the World's Fair on the shores of Lake Michigan for the closing scene in the Pageant "Wings of a Century." Until then, the fastest scheduled steam run was approximately 26 hours, yet if the little *Zephyr* were to do what Budd promised, it would have to cover 1,015 miles in not more than fourteen hours. Nevertheless, the commitment was made, and it was literally true that on the appointed day the eyes of the nation were upon Denver.

How that run almost failed before it ever got started has become a legend, for to the horror of all concerned it was discovered, some twelve hours before the scheduled starting time, that one of the motor armature bearings was cracked and would have to be replaced. As the hours ticked away, no such bearing could be found. Not until evening was it discovered that the Union Pacific people had a motor in Omaha from which, sportsmanlike rivals that they were, they would be willing to pull the necessary bearing; conceivably it could be brought by chartered plane to Denver in time for installation. That was the state of things when Ralph Budd went on the air to make a pre-arranged broadcast about the morrow's trip. Down at the shop where the essential bearing had not yet arrived, the workers clustered around the

radio wondering what Budd would say. His opening remark told the story: "Tomorrow at dawn we'll be on our way!" He went on to invite people all along the right of way to watch the new train flash by. If ever a man burned his bridges behind him, this was the time. It was past midnight when the new bearing arrived. At 5:05 a.m. the next morning the *Pioneer Zephyr*, more than an hour late, left Denver.

For awhile speed had to be held down to 50 miles an hour to allow the new bearing to work itself in, but when it once did so, the little train gathered momentum. All along the right of way, and at the 1,600-odd grade crossings, were crowds to watch. Hour after hour the *Zephyr* sped on, while Ralph Budd, among other things, calmly shaved with a straight-edged razor simply to find out whether the train was running as smoothly as he thought it would. It was.

Yet, just when all seemed going well, someone inadvertently slammed a door on an electric cable, setting up a short circuit that burned out the starting mechanism. Frantically men searched for a piece of wire and in the nick of time spliced the break; when the job was done the *Zephyr* had slowed to 15 miles an hour.

That was not the only near-stop, but it was the most serious. By a combination of quick thinking, brilliant improvisation, and just plain determination, the little *Zephyr* kept going until, at 7:10

p.m., thirteen hours and five minutes after leaving Denver, it reached the Chicago city limits. Without stopping it went on to the lake front and at exactly 8:09 p.m. rolled on to the stage of the Wings of the Century. Bedlam broke loose. A new age had dawned for the railroads.

Throughout Ralph Budd's administration, the Burlington was in the forefront of Diesel development. By the time he retired in 1949 over 80% of the system's passenger trains and over half of its freight trains were Diesel powered, while the fastest regularly scheduled train in the nation rode Burlington rails between Chicago and the Twin Cities. What the Diesel engine meant in carrying the enormous burden of World War II traffic could hardly be estimated. Today it is merely a matter of a year or two before all regularly scheduled operations on the Burlington, and on virtually every other road, will be handled by Diesel power.

Ralph Budd would be the last man in the world to call this a one-man revolution. Facts, however, speak louder than pleas of modesty, facts that brought to Budd the highest honors bestowed by the nation's national engineering societies for his "vision and courageous leadership in advancing the technological frontiers of high speed railroad transportation."

So many specific achievements of Ralph Budd were spectacular in themselves that attention is

easily diverted from the common denominator policies that underlay particular projects. In respect to railroad lines, for example, Budd was always convinced that maximum use should be made of the most efficient route between any two points rather than dispersing effort and expense over duplicate or less efficient lines. Consequently he was persistently in favor of intelligent consolidation of railroads. By the same token, he was in favor of letting each type of carrier specialize in the sort of transportation for which it was best fitted.

The opening of the Denver gateway and the coordination of through freight service on the part of the Burlington, Rio Grande, and Western Pacific was a case in point. Nor was Budd the man to rest on his oars if a promising start warranted further effort in the same direction. If the Dotsero Cutoff route was a good one for freight, why not take advantage of it for through passenger service? The scenery through the heart of the Rockies and along the Feather River Canyon through the Sierras in California was unsurpassed, and although the length of that route would not permit competition time-wise with the Union Pacific-Southern Pacific to San Francisco, there might be many people who would prefer a more leisurely, more comfortable, and far more scenic journey. Consequently, in June, 1939, Budd persuaded the Rio Grande and Western Pacific to join the Burlington in establishing a through daily train known

as the *Exposition Flyer*. Inaugurated originally simply to run during the summers, it became so popular that it was retained as a year-around train. Just ten years later it was replaced with the spanking new stainless steel *California Zephyr*, one of the most popular transcontinental trains on the continent.

Quite a different undertaking, yet one linked to it so far as basic policy was concerned was the attempt of the Burlington and six other railroads to take over the tottering Minneapolis & St. Louis. The main line of this road proceeded in a wide, round-about arc southward from the Twin Cities and then eastward to Peoria. Under prosperous conditions it carried overflow traffic from more direct routes, and sought to capitalize on the fact that it by-passed the crowded Chicago area. But during the depression it had become hopelessly bankrupt, and showed little prospect of being able to recover and continue as an independent system. Consequently Budd eagerly seized upon a plan devised by John Barriger, then in charge of railroad matters for the Reconstruction Finance Corporation, for parcelling out approximately one thousand miles of the M.&St.L. to seven major adjoining carriers. The remaining three hundred miles, for which there seemed little justification, were to be abandoned. Under the proposed scheme, among other things, the Burlington would gain a shorter line between Peoria and Iowa.

In Ralph Budd's opinion, the plan was eminently logical. It would, as he put it, have cleared out dead wood from the railroad forest, and would have enabled neighboring carriers—which obviously had to remain in business anyway—to provide far better service in a more rational fashion than the ailing Minneapolis & St. Louis could do. The entire project, furthermore, was squarely in line with the coordination principles set out in the Transportation Act of 1920.

Naturally enough, however, the new and vigorous receiver of the M.&St.L., Lucian Sprague (who, incidentally, learned his railroading on the Burlington) as well as many of the local communities strongly opposed the plan and in 1938 it was denied by the Interstate Commerce Commission. Although the road has since made a gratifying recovery, Budd still feels that a splendid opportunity was missed to rationalize the railway plant.

Rearrangement of railway lines was by no means the only way to achieve coordination of the total transportation effort. As president of the Great Northern, Budd had been one of the first to substitute busses for branch line passenger trains. And as a director of the Burlington he had, of course, supported incorporation of the Burlington Transportation Company in 1929 with power to operate busses on the public highways. In 1934, through bus service was extended to Omaha, Denver, and on to Los Angeles.

In 1937, in line with Budd's policy of coordination, Burlington Transportation Company joined with similar organizations controlled by the Santa Fe and the Missouri Pacific to form the National Trailways System which thereupon became, and still is, the most active competitor of the Greyhound Lines. Budd realized, however, that the operation of such an extensive bus system was a separate undertaking in itself; the major interest of the railroad in busses was to provide supplementary service for the patrons in its area, as well as a feeder system for its main line. When it became apparent that the Trailways would provide this service even if they were independent, the Burlington (in 1946) sold out its interest in the organization at a handsome profit.

The relation of trucks to Burlington rail service, however, was a different proposition. Trucks could perform a permanent feeder service to the main line, and in many instances act as substitutes for way freights on lines which might well be abandoned. Hence in 1935 the original Burlington Transportation Company (initially organized simply to operate busses) established a truck division. When the transportation company was sold it conveyed all its truck rights and property to a new, wholly-owned subsidiary of the C. B. & Q. known as the Burlington Truck Lines, Inc. This organization has expanded steadily since that time and now conducts a full-fledged truck

business in competition with independent truck lines, and offers as well a feeder and supplementary service for the entire Burlington system. Incidentally, as early as 1940 the C.B.&Q. was transporting its truck trailers on flat cars between Chicago and Kansas City and to such major intermediate points as Galesburg.

Although the Burlington had little difficulty in securing approval for acquisition and development of its truck lines, it failed to gain authority for a logical supplementary passenger service. In July, 1943, Budd sought to set up helicopter service from such cities as Peoria and Des Moines to nearby division points on the Burlington main line like Galesburg and Ottumwa where all trains stop. But because the C. B. & Q. already owned a bus service, the government contended that approval of the proposed helicopter plan would constitute a monopoly of transportation despite Budd's vigorous contention that there were already many other competing services such as independent bus lines, air lines, and the private automobile. These arguments were to no avail, however, and the rather exciting proposal was turned down.

Another attempt on Budd's part to rationalize an unwieldly situation met with obstacles of a different sort. To all intents and purposes the main route from Denver southeastward through Colorado Springs, Trinidad, the Texas Panhandle, Fort Worth, Dallas, and Houston, was a unified

transportation agency. It had been conceived as such by the two forceful men who built it, Governor John Evans of Colorado and General Grenville Dodge, and from the time of its completion in 1888, had operated as such. From a corporate standpoint, however, it was two separate entities: the Colorado & Southern from Denver southward to the Texas state line, and from there on the Fort Worth & Denver City Railway, even though the C. & S. owned virtually all the stock of the Texas road.

During the depression years these two western subsidiaries suffered heavily not only from depressed conditions but from long droughts; the C. & S. in particular found itself in desperate financial straits toward the end of the 1930's. Under the circumstances, it seemed obvious to Budd that tremendous economies could be effected by unified operation. Because the C. & S. charter was far more flexible than that of its Texas partner, the logical step was to lease the Fort Worth & Denver to the C. & S., and in 1939 that company asked the I.C.C. for permission to do so.

Thereupon a veritable storm broke loose in Texas. Amon Carter, powerful journalist and civic leader in Fort Worth, dubbed the proposal a "Burlington Blitzkrieg," threatened to have the line boycotted by shippers, and even proposed building a parallel highway to be christened, in derision, the "Ralph Budd Highway." Not even

a personal visit on Budd's part could mollify Carter or his fellow Texans, who regarded the proposal as a mortal affront to the sovereignty of the Lone Star State. The I.C.C., however, impressed by the obvious economies that could be realized, at first authorized the proposal. The Texans, of course, appealed the decision and while the matter was pending the Transportation Act of 1940, which carried an amendment concerning the protection of jobs, became law. The Act furnished a reason for reopening the proceedings and in due course the I.C.C. rejected the proposal.

As always, Budd accepted the outcome philosophically and in the next two years worked out an ingenious proposal for refinancing the Colorado & Southern separately and putting it on the way to recovery. One novel aspect of that debt adjustment plan was the Burlington's pledge not to declare or accept dividends from the Colorado & Southern during the life of the plan. Actually the C.B.&Q. had no obligation whatever toward the bondholders of the C.&S., but it was Budd's feeling that they probably bought the bonds because the C.&S. was a part of the Burlington system, and that the ordinary dictates of fair play made it only reasonable for the Burlington voluntarily to do its part to help its subsidiary back on its feet. So well did the debt adjustment plan work that when Budd retired from the Burlington in 1949, the C.&S. was again financially sound.

Meanwhile, typically enough, Budd had persuaded Amon Carter to bury the hatchet. As a result there was no objection in Texas when, in 1951, the F.W.&D.C. sought for and obtained an amendment of its charter which enabled it to absorb the several branch lines in Texas which previously had been owned by the Colorado & Southern, and to simplify its own financial structure so that in the end most of the economies Budd had visualized in 1939 were realized.

A strikingly similar and equally important step took place on the C.B.&Q. proper in respect to the development of an efficient Chicago-Kansas City line. Way back in 1859 the old Hannibal & St. Joseph connected the cities named in its title by a railroad which was then the westernmost portion of the national network. Immediately after the Civil War a branch was built near the western end of the line almost due south to Kansas City, thus forming a through route via the C.B.&Q. from Chicago by way of Galesburg, Quincy, Palmyra, and Cameron to Kansas City; the entire mileage came under Burlington control when the C.B.&Q. acquired the Hannibal & St. Joseph in 1883. From 1869, when through service first began, until 1888, this was the most popular route between these two major cities. In the latter year, however, the Santa Fe completed its shorter line and from then on gradually took over the bulk of the traffic until, by the 1930's, the Burlington's

Chicago-Kansas City route was hopelessly outclassed.

To Ralph Budd this was an intolerable situation. Next to Chicago, Kansas City was the most important gateway on the entire system; from it ran the Burlington rails northward toward Omaha as well as northeastward toward Chicago. Even more to the point, as Budd emphatically recognized, the Chicago-Kansas City line pointed toward the heart of the Southwest, an area that was increasingly generating more traffic.

It was entirely feasible to improve this line to make it fully competitive, and Budd proposed such a plan. Various circumstances prevented immediate undertaking of the project, and then World War II necessitated further postponement. Once the war was over and materials were again available, Budd turned to the situation in northern Missouri like a hound dog in full cry. The first thing he did was to persuade Isaac B. Tigrett, president of the recently-enlarged Gulf, Mobile & Ohio, to grant to the Burlington trackage rights between Mexico and Kansas City so that the Burlington's St. Louis-Kansas City service could compete on equal terms with that of the other lines connecting those two cities. But this was only a first step, for Budd saw in it a possibility of solving the even more important Chicago-Kansas City problem. The Santa Fe had long been anxious to get into St. Louis. Why not, therefore, let the

Santa Fe into that city over the Burlington and in exchange obtain trackage rights over the Santa Fe's short line from Kansas City to Bucklin, a point on the old Hannibal & St. Joseph main line near Brookfield, Missouri?

As it turned out, the vigorous opposition of other railways serving St. Louis was sufficient to cause denial of the proposed exchange of facilities between the Burlington and Santa Fe. But hardly had the dust settled from that decision when Budd proposed building a cut-off over seventy miles long (including over forty-two miles of brand-new railroad) that would be, in effect, the chord of the arc formed by the old line through Cameron Junction. This plan the I.C.C. approved on August 18, 1949, just a fortnight before Budd's retirement from the presidency. Thus in the very last moments of his administration, his patience and tenacity found another reward. The new railroad was opened for freight service in October, 1952, and for passenger business in February, 1953. Typically enough, however, Ralph Budd refused to permit the succeeding administration to name even a siding in his honor on the new line.

To Ralph Budd, World War II brought one specific responsibility which in itself tested his mettle and experience, not to say his energy, to the extreme. In May, 1940, President Roosevelt appointed him Transportation Commissioner on the Advisory Commission to the Council of Na-

tional Defense. This meant, in effect, that he was responsible to the Federal Government for the performance of the nation's transportation plant during the crucial months of frantic preparedness. As he felt was his duty, he accepted the post immediately despite the inevitable intensification of his concurrent responsibilities as president of the Burlington. For the next year and a half he shuttled relentlessly between Chicago and Washington yet, so far as anyone could see, the back-breaking schedule failed even to dent his relaxed manner, his miraculous way of finding time to give full attention to all matters that warranted it, or his effervescent sense of humor.

The first problem Budd had to decide in Washington was whether to set up an entirely new, large organization to cover all phases of transportation throughout the country, or to use, whenever possible, existing organizations that already represented the carriers and the public. To choose the former course would have been squarely in the tradition of the contemporary administration, and might have been seized upon eagerly by anyone wishing to achieve the sort of notoriety that inevitably focuses upon the head of any large organization. But characteristically enough, Budd chose the latter alternative. The Interstate Commerce Commission, he felt, was fulfilling its functions efficiently, and he believed he could depend upon the Association of American Railroads, the

American Trucking Association, the Lake Carriers Association and others to transmit and implement his top-level plans in respect to the carriers they represented. "Clearly it was in the interest both of efficiency and economy," he concluded simply, "to make use of the existing agencies as far as possible, rather than to establish duplicate and at least to some extent rival administrations." This, indeed, was a novel approach at the time. And it succeeded admirably.

Working through existing organizations, then, Budd with a tiny staff of eleven persons (including stenographers and clerks) kept his finger on the pulse of the transportation system through a selected but highly informative series of statistical reports that reached his office daily. Armed with this information, which he could interpret into practical planning, his principal function was to make suggestions to the various carriers with the single objective of moving goods and people as rapidly and efficiently as possible.

There was a strong group within the government at Washington that firmly believed the railroads should be taken over to provide adequate transportation for the defense period and the possible war emergency to follow. Budd resisted this proposal firmly and successfully. To the statement that the railroads could not get the necessary equipment he replied that it would take no more material for the railroads to build cars and loco-

motives than for the government to do so, and that all that was necessary to insure the best service was to let the railroads have the necessary tools to work with. To the railroads he recommended that the freight car pool be increased first to 1,700,000 and then to 1,800,000 cars. The roads responded promptly and only the shortage of material prevented their reaching the goal during his administration. At the same time, and at his urging, the railroads reduced the percentage of bad order cars to the lowest level in history. Along similar lines, approximately 1,000 new locomotives were ordered and the percentage under repairs brought down. Shippers were urged to load cars promptly and to load them as heavily as possible.

In the motor carrier field, the Transportation Commissioner carried through a survey of all busses and trucks in the country and thus assembled in a single spot more detailed information on that subject than had ever before existed. Plans were also suggested and carried out for improved access highways so as to relieve congestion, particularly around defense production plants. A similar survey was made of equipment available for inland water transportation, while on the Great Lakes arrangements were completed for additional ice-breaking service that resulted, during 1941, in the longest navigation season in history; during that year the total movement of iron ore exceeded by nearly 15,000,000 tons the highest previous

record. But it was typical that in making his report Budd commented that, "In honesty it must be said that unusually favorable weather aided more in extending the season than did the facilities." What he did not point out was that had it not been for the moves he instituted, the record would have been substantially less impressive.

Other steps taken by the Transportation Commissioner can only be summarized. In order to provide adequate grain storage, a system was worked out so that grain was not loaded into cars that could not be promptly unloaded upon arrival at destination. Also to avoid congestion, all users of coal were urged to build up their stocks during the summer against the inevitable demands of winter. In order to provide enough passenger cars to move troops, railroads were urged to increase their standby fleet by discontinuing unnecessary trains and by combining others whenever it could be done without serious inconvenience to the public. At the same time Budd fought a prolonged battle to obtain vital materials for all carriers. He urged abandonment of unnecessary facilities, concentration of scrap metal, and the granting of priorities for essential parts. A great deal of attention was devoted to making an inventory of storage space available for materials and food stuffs; an inventory of quite a different kind pinpointed those strategic rail and port facilities that required special protection against possible sabotage.

With the entry of the United States into war in December, 1941, Budd's organization was taken over by the newly-created Office of Defense Transportation under the direction of Joseph B. Eastman, and once again Budd was able to devote his full time to the Burlington. No one was more emphatic than Eastman himself in recognizing and stating what Budd had done in preparing the transportation facilities of the nation for the even greater task that lay ahead.

When Ralph Budd became president of the Burlington at the beginning of 1932, its financial fortunes were at the lowest ebb in years. During the first year of his administration funded debt was nearly $220,000,000, fixed charges nearly $9,500,000, while gross revenues had sunk below $80,000,000 leaving a net income of barely $1,-500,000. By 1941 moderate recovery was in sight; gross had climbed gradually to $117,000,000 and net to over $10,000,000. But at the same time fixed debt had reached a peak of $251,000,000 while interest charges had mounted to $9,800,000. The impact of war traffic inevitably brought greater revenue. In fact, gross for 1945 reached what was then an all-time high of over $242,000,000 while net rose to over $27,000,000.

Gratified as he was by these results, Budd realized early in the war that so long as the funded debt and interest charges remained high, the Burlington would be ill-equipped to spend what

would be needed to refurnish the plant after hostilities ceased or to withstand hard times later on. Consequently as soon as earnings warranted it, in 1942, he began purchasing and retiring outstanding bonds. In 1944 he devised and launched an inclusive program of debt reduction. As a result, in the six years 1942-1947, inclusive, funded debt, including equipment obligations, was reduced by nearly $70,000,000, while interest charges fell from over $9,800,000 to less than $5,800,000. This sort of achievement can be expressed only in figures that are inevitably dull, but it was noted with profound respect in railway and investment circles. As Adams & Peck of New York observed in March, 1948, for example:

"Much of the progress achieved by the Chicago, Burlington & Quincy is directly attributable to an ultra-progressive management. This road was a pioneer in the use of Diesel locomotives, streamlined passenger trains, and fast schedule freight operations. The aggressive policy of debt reduction followed in recent years is another indication of a wideawake management."

Meanwhile, Budd continued his search for anything that would make his railway's service more efficient and more attractive. There was no more spectacular symbol of his success than the nation's first dome car.

The idea first occurred to C. R. Osborne, a General Motors executive, while riding through Glenwood Canyon in a caboose. Why, he rea-

soned, couldn't a cupola be built on a passenger car so that travelers could enjoy the very sort of magnificent scenery he was then passing? Since General Motors was not building new types of automobiles at the moment because of wartime restrictions, their styling department had time to make a mock-up of a dome car. Quite frankly, the manufacturers were highly doubtful whether the conservative railway industry would adopt anything so radical and so costly to build. "We'll show it to Budd," Osborne decided, then added, so the story goes, "If he doesn't like it we'll take an ax and chop the thing to bits."

Let Ralph Budd pick up the story from there: "After seeing it, it seemed to me it was worth trying out and I asked Mr. Osborne if there were any objections to our taking a stainless steel coach which was in Aurora, and cutting a hole through the roof and building a dome in it. He said he wouldn't object at all; . . . some of his associates were very helpful to us in making plans, and we did build a dome from a coach."

This sober account hardly tells the full story. The moment that the car was put into regular service on one of the *Twin City Zephyrs* on July 23, 1945, it made an instant hit. Another car was converted at once so as to afford simultaneous service in each direction, and before the year was out five "Vista Domes" had been ordered for each of the new *Twin City Zephyrs* as well as for each of the

six *California Zephyrs* then on order. As was the case with the Diesel engine, Budd had again captured a "first" for the Burlington.

It would take a book to tell the full story of Budd's seventeen brilliant years on the Burlington; entire chapters could well be devoted to matters that cannot be elaborated here, such as his making the system a leader in the fields of centralized traffic control, radio communication, fast freight operation, and the like, or his training of men like Fred Gurley, John Farrington, Fred Whitman, Harry Murphy, and A. E. Perlman, all of whom have gone on to head great railways. In the words of the distinguished editor of *Railway Age*, when Budd retired in 1949, the Burlington was "principally the 'lengthened shadow' of Ralph Budd."

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