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IN THE

Supreme Court of the United States

OCTOBER TERM, 1937.

No. 161

SOUTH CAROLINA STATE HIGHWAY DEPARTMENT, SOUTH CAROLINA PUBLIC SERVICE COMMISSION, ET AL.,

Appellants,

vs.

BARNWELL BROTHERS, INC., POOLE TRANSPORTATION, INC., HORTON MOTOR LINES, INC., ET AL.,

Appellees.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF SOUTH CAROLINA.

BRIEF FOR APPELLEES.

Preliminary Statement.

Counsel for the original and intervening defendants, appellants, have incorporated in their separate briefs identical statements of the case, citation to the opinion of the District Court, jurisdictional statement, specifi-

cation of the statute involved, and of the rulings and final decree of the District Court. Inasmuch as these statements and specifications are correct it is unnecessary to make further statement or specification of these matters here.

Counsel for appellants correctly state, at page 3 of their briefs, that the only provisions of the South Carolina Act (Act No. 259, approved April 28, 1933, 38 St. at Large 340, printed in full in Appendix I of South Carolina Brief) which are in issue on this appeal are Section 4, imposing a gross weight limit of 20,000 pounds, that portion of Section 2 requiring tractor-semi-trailer combinations to be considered as a single unit for determining gross weight, and Section 6 imposing a width limit of 90 inches.

In their "summary of evidence" at page 11 of their briefs appellants' counsel have toned down the evidence in the record as to the burden which will be inflicted by the enforcement of the regulations upon interstate commerce, and have de-emphasized the testimony of appellees' witnesses regarding the capacity of the highways and the reasonableness of the contested regulations as applied to them. In particular this "summary of evidence" omits the opinion of the Chief Highway Engineer of South Carolina that the South Carolina roads enjoy the reputation of being "as good as any in the country" (R. 180) and "are the best in the Southeastern part of the country" (R. 184). No additional or substitute summary of the evidence will be here made, but a proper summary of the evidence of record as to the burden inflicted upon interstate commerce will be found under subsection B of Section I of this brief, and a more complete and proper reference to the evidence as to the capacity of the highways and the reason-

ableness of regulations as applied to them will be found in subsections A and B of Section 2 of this brief.

Four briefs on behalf of appellants have been filed in this Court; the brief of the original defendants, the brief of the intervening railroad defendants, and the briefs of the States of Kentucky and Illinois, *amici curiae*.[1]

Inasmuch as these briefs have apparently been commonly designed to cover and separately emphasize the same arguments we will consider them as one brief to which this brief is reply.

SUMMARY OF ARGUMENT

Appellees by this brief support the conclusion of law of the District Court that the following quoted sections of the South Carolina Act (No. 259, approved April 28, 1933, 38 St. at Large, 340) are unconstitutional and void in that they contravene Section 8 Article 1 of the Constitution of the United States by arbitrarily and unreasonably inflicting a substantial burden upon interstate commerce and exceed the reasonable necessity for their exercise.

No contention is here made that these sections of the South Carolina Act have been superseded by either the Federal Highway Act (Section 1 to 56, Title 23 U. S. C.) or the Motor Carrier Act, 1935 (Section 301 to 327, title 49 U. S. C.)

SECTION I.

The enforcement of the South Carolina regulations will inflict a substantial burden upon and seriously interfere with interstate commerce. The commerce af-

[1] These briefs will hereinafter be referred to respectively as "S. C. Br.", "Rd. Br.", "Ky. Br.", and "Ill. Br.".

fected is the transportation of commodities over land highways in the South Atlantic Region of the United States. The use of the highways involved is not confined by the pleadings or proof to their use for hire, but includes their general use for the transportation of commodities in interstate commerce. This use of the highways is not special or extraordinary but is one of their primary historic functions. After playing an integral part in the civilization and development of this country, both prior to and after its independence, the interstate transportation of commodities over land highways at the end of the third decade of the Nineteenth Century fell into desuetude because of the competition of railroads. However, the national government, during the early years of the Republic, had exerted its powerful influence in the promotion of this commerce by its participation in the construction and control of interstate highways. After the renaissance of highway transport during the first two decades of the present century, the national government in 1921 entered upon a cooperative undertaking with all the States, to build a national system of highways, which were to remain within the control of the States, but were to form an inter-connected, interstate system, integrated with the various State highway systems. As a result of this undertaking the nation now possesses a national interconnected system of interstate highways adequate to carry the reborn transportation of commodities in interstate commerce which has assumed a status of great importance in the transportation life of the nation. In 1935 the Congress of the United States undertook comprehensive regulation and protective promotion of a large part of this commerce. The enforcement of the South Carolina regulations will practically bar a great

part of this commerce from the Southeastern section of the United States and deny its benefits to the people of that section. It will defeat the purposes of the cooperative undertaking by which the Federal government extended aid to the States in building and planning the interstate highway system, and will defeat the purposes and policies of Congress in its regulation and preservation of that commerce.

II.

The burden upon interstate commerce which as shown in Section I will be inflicted upon interstate commerce by the enforcement of the South Carolina regulations will be arbitrarily and needlessly imposed. The regulations, as applied to the existing transportation of commodities over the main interstate highway system of South Carolina, transcend the reasonable necessity for their exercise, irrespective of the physical capacity or functional character of those highways, and *a fortiori* because of the capacity and functional character of those highways.

III.

State police power is conditioned not only by the Fourteenth Amendment to the Constitution of the United States but also by the Commerce Clause of the Constitution. State police legislation inflicting a substantial burden on interstate commerce and transcending the reasonable necessity for its exercise is void under the Commerce Clause. This accepted constitutional principle is also applicable to State legislation limiting the size and weight of motor vehicles engaged in interstate commerce. Measured by this principle, under the evidence in this case, the South Carolina regulations

are void. That the enforcement of these regulations will defeat the purposes of Federal aid to highways and that it will subvert the policies and purposes of the Congress of the United States in its regulation and promotion of motor transport are factors which are relevant in the application of this principle.

IV.

The limitation of injunctive relief by the District Court was not an usurpation of the legislative prerogative, as contended by appellants, but a proper and valid exercise of its broad equitable discretion and was necessary for the protection of the public interests of the State of South Carolina.

I.

THE COMMERCE AFFECTED AND THE BURDEN IMPOSED

Appellees contend, as found by the District Court upon adequate evidence, that the South Carolina regulations, first, will impose a substantial burden upon and drastically interfere with interstate commerce, and, second, arbitrarily transcend the reasonable necessity for their exercise to create the burden. In Section III of this brief it is demonstrated that the concurrence of these two conditions invalidates the regulations under the Commerce Clause. In Section II it is demonstrated that the finding of the District Court as to the second condition was warranted. In Section I will be discussed (A) the commerce affected, and (B) the burden imposed.

A. The Commerce Affected

The commerce affected is the interstate transportation of commodities by motor vehicle over the highways of the nation. The transportation involved is *commercial* as opposed to the use of the highways for *pleasure and travel;* it is the transportation of *commodities* as opposed to the transportation of *persons,* as to which the regulations in issue do not apply. (S. C. Acts, 1933, No. 259, Sect. 2.)

The commerce affected thus involves the use of the highways for *commercial* purposes. Here adversary briefs fall into fundamental error. They attempt to confine the commerce affected and the issues involved to *the use of the highways for gain.* Thus the Illinois brief (at page 20) states:

> "We have already stated that this case does not involve the use of highways for private purposes. It was brought by the operators of motor trucks who use the highways for the purpose of gain,"

and cites *Stephenson* v. *Binford,* 287 U. S. 251, 264; *Packard* v. *Banton,* 264 U. S. 140, 144; *Hodge Co.* v. *Cincinnati,* 284 U. S. 335, 337; and *Frost Trucking Co.* v. *Railroad Commission,* 271 U. S. 583, 592, to the effect that the "primary and preferred use (of the public highways) is for private purpose; and that their use for purposes of gain is special and extraordinary." It is needless to dwell upon the consideration that the cited cases did not involve interstate commerce, were decided under the Fourteenth Amendment, and involved the internal commerce of the States, or to compare the quoted language with the declared purposes of Part II of the Interstate Commerce Act (Motor Carrier Act, 1935.)[1]

The important consideration is that when it referred to the use of the highways for gain as being special and extraordinary this Court referred to the use of the highways by motor carriers *for hire* and not their use by commercial vehicles generally. The legal considera-

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[1] "It is hereby declared to be the policy of Congress to regulate transportation by motor carriers in such manner as *to recognize and preserve* the inherent advantages of, and foster sound economic conditions in, such transportation and among such carriers in the public interest; *promote* adequate, economical and efficient service by motor carriers . . . develop and preserve a highway transportation system properly adapted to the needs of the commerce of the United States. . ." (Sec. 202)

In *Contracts of Contract Carriers,* Ex Parte No. MC-12, decided April 21, 1937, 1 M. C. C. 628, 629, Division 5 of the Interstate Commerce Commission said: "This principle is inherent in the Motor Carrier Act, 1935. The underlying purpose is plainly to promote and protect adequate and efficient common-carrier service by motor vehicle in the public interest, and the regulation of contract carriers is designed and confined with that end in view."

And in *Henry R. Butcher Contract Carrier Application,* No. MC-50170, decided Feb. 15, 1937, 1 M. C. C. 485, 487, that Division said: "It is in conformity with the declared policy to protect the interest of the public by authorizing the continuance of a transportation system which had been built over a substantial period of time. . ."

tions pertinent to the use of the highways by motor carriers for hire are not apposite in this case. The South Carolina regulations are not confined in their operation to carriers for hire, but apply to all who use the highways for the transportation of commodities. Parties to the bill of complaint are not only carriers for hire, using the highways for gain, but shippers and manufacturers making a private use of the highways. The burden which will be created by the enforcement of the regulations will fall heavily upon private users and users for gain alike, as well as upon the cities, ports, localities and the public generally now receiving the benefits of the commerce. The motor carriers for hire, parties to the bill, assert a position and seek a protection in common with all who use the highways for the transportation of commodities, be they private, common or contract carriers. The regulations apply indiscriminately to them all, and no pretense is made that there was a legislative intent that they should be separately applicable to carriers for hire.[1]

Irrespective of the power of a State, since the passage of the Motor Carrier Act, to discriminate between private carriers and carriers for hire in interstate commerce as to size and weight of vehicles, certainly where no discrimination has been attempted and all are regulated as one class, the test of the validity of the regulations is the same as it may affect the one or the other. In seeking the protection of the Commerce Clause against the enforcement of these general regulations, the private carrier occupies no privileged status, nor

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[1]It is recognized that trucking for own use constitutes the major part of all trucking operations in the United States. Of the more than 3,500,000 commercial motor trucks registered in the United States in 1935, only approximately 188,809 vehicles were primarily engaged in for-hire operation. "Motor Trucking for Hire, Census of Business, 1935," page 5.

the carrier for hire, because it might have been separately or differently treated, an inferior one.

Neither in the above cited cases, nor in any other decisions has this Court even suggested that the use of the highways for the transportation of commodities was special and extraordinary or subservient to their use for travel or pleasure. Such a theory would be foreign not only to the historical function of land highways, but also to the history and purposes of the existing highway system of this nation.

The commercial transportation of commodities is an historic and primary function of land highways.

The highway is the most ancient avenue of commerce. Its use for the commercial transportation of commodities in local and international commerce has been continuous throughout the recorded history of man. The highways of nations, whether they have been highways of land or sea, or both, have been the most vital elements in their progress and could almost as well as transportation itself be considered the measuring rod of civilization. Coeval with the earliest civilizations in Central Asia were trade and commerce over land highways between Arabia, Babylon, Cashmere, Morocco, Phoenicia, the Far East and the regions of the Nile, and the function of the roads for commercial transport continued to be a measure of the ascendant civilizations of Greece, the Roman Empire, the Middle Ages and modern Europe. The closing of the eastern caravan routes by the Turks sent Columbus westward to America.

During the early development of this country, prior to its independence, the transportation of commodities over land routes played an indispensable part. It was necessary that the inter-coastal commerce and commerce over the inland waterways be integrated by land

routes. The early portages gave way to overland trails and roads. Traders from Virginia who reached far out into Tennessee and Kentucky found competition from those who came down by one of the several routes from the Great Lakes or up from the Lower Mississippi. The purchase of the Louisiana Territory and the extension of settlement of the prairies beyond Missouri, the opening of Oregon and later California, created a demand for transcontinental roads. These roads extending into the Far West were not only for purposes of settlement but were means for going to and coming from fur-trading posts which large companies established throughout the whole Rocky Mountain region. During the same period there were opened up trade and trade routes with the Spanish possessions farther south. The Oregon Trail, the Santa Fe Trail, the Spanish Trail, and the Gila Route had become well known by the early 30's and, until after the development of the trans-continental railroads, carried great quantities of commercial traffic across the continent.

In the meantime the transportation of commodities overland from the Atlantic Seaboard to the Ohio and Mississippi Valley and the prairie country of the Middle West was welding the new nation politically and socially. At the turn of the century pack-horses were giving way to wagons. The business of packing was so widespread and strong that when wagons began to take over the business of trading the packers considered it an infringement upon their vested rights, but because goods could be transported more easily and cheaply by wagon the old had to make way for the new. Wagon roads and at first two-wheel and then four-wheel vehicles made their appearance. This created a demand for better roads. At first the pack train trails were merely widened but about the beginning of the 19th Century Tres-

guet, in France, and MacAdam and Telford, in Great Britain, were building broken stone roads which quickly changed and augmented the internal commerce and industry of those countries. The most populous and wealthy of the Colonies likewise began to consider the road question. A few military roads, such as Braddock's, had been constructed. There was a road along the coast of Massachusetts, and some roads and bridges in the interior; there were roads connecting the larger cities, as from Boston to New York, and from New York to Philadelphia. The first scientifically built hard surface road in America was the Lancaster Turnpike from Philadelphia to Lancaster, which was stoned in 1792 by throwing on it stones of all sizes. These were afterwards removed and stones "passing a two inch ring" substituted. In 1800 Pennsylvania facilitated the construction of a system of turnpikes by granting franchises and subscribing stock, which was eventually to cover the State and control the Western markets. By 1828 there had been 3,110 miles of chartered turnpike in Pennsylvania costing over eight million dollars. These thousands of miles of fine turnpike roads, including many good bridges, placed Pennsylvania in the lead for internal improvements, but other states were similarly employed. New York and New England by 1811 had chartered 317 turnpikes.[1]

In 1816 Virginia appropriated funds "to be used exclusively for river improvements, canals and public highways." South Carolina voted a million dollars in 1818 to be raised in four annual levies for similar purposes. During these years the States were opening public roads, but the only good roads were those built

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[1]Gallatin's Report for a Scheme of National Roads and Pavements: Adams' Gallatin, page 315, et seq.)

by the turnpike companies, which erected gates and collected tolls every few miles. The Revolutionary War had shown the need of roadways for quick intercourse between the seaboard and the trans-Alleghany regions. The efforts of the different States, still retaining their colonial jealousies, to secure the control of trade emphasized the need of a unifying influence to bring harmony. Demand was made for national participation. Eminent statesmen, notably Thomas Jefferson, James Madison, Albert Gallatin, and Henry Clay, planned for a national system of internal improvements by roads and canals which would unify the nation and facilitate commerce among the States. In 1808 Albert Gallatin, in compliance with the wish of the Congress of the United States, drew up a scheme for a national system of internal improvements by roads and canals at an annual expense of two million dollars for ten years, but sharp constitutional debate developed as to the power of the Federal Government to make expenditures for these purposes, the war of 1812 brought substantial financial burdens upon the Government, and finally, at the end of the fourth decade of the new century, the inauguration of railway transportation brought an end to this early dream for a national system of transportation by land highway and prevented the contemplated development of North and South routes which we might well believe would have matured in time to prevent the great Civil War, half a century later.[1] However, the accidental entry of the railroad

[1]For this brief consideration of the development of highway transport in America prior to the coming of the railroad, reference has been made to A. B. Hulbert, Historic Highways of America, 16 Vol. 1902-05, A. H. Clark Co., Cleveland, Ohio; A. B. Hulbert, The Paths of Inland Commerce, Chronicles of America Series, Vol. 21, New Haven, 1920; Henry Adams, Life of Albert Gallatin, Vol. I, J. B. Lippincott & Co., Philadelphia; Frederick J. Turner, Rise

into the country's transportation life did not come until after the national government had taken a major part in the development of highway transport and trade between the Eastern States and the Middle West.

The First Era of National Participation in the Development of Interstate Commercial Highways.

On March 29, 1806, President Thomas Jefferson approved a bill appropriating $30,000 for the survey and construction of a road from a point on the Potomac near Cumberland to the Ohio River near Steubenville, later to be known popularly as the Cumberland National Road. Thus the first participation of the national government in the development of interstate commercial highways took the form of actual federal construction, maintenance and control of a connected and improved highway, over 700 miles long, passing through the States of Maryland, Virginia (now West Virginia), Pennsylvania, Ohio, Indiana and Illinois. Permission to build the road was gained of each State through which it passed. The growth of the road was slow after the first appropriation in 1806. In 1811 the first contract was let for ten miles of the road west of Cumberland, Md., its eastern terminus. The road was opened to the Ohio River in 1818.[1]

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of the New West, Vol. XIV of the American Nation Series, Harper & Bros., New York; George R. Chatburn, Highways and Highway Transportation, Thomas G. Crowell Co., New York.

[1] "Thus had the old Indian trail developed into a route for Washington and his band to Fort Necessity; into Braddock's road to Great Meadows; into a pack train trail trampled by thousands of caravan hoofs; and, finally, into a finished paved highway cleared to 66 feet in width, having no grade above 5 per cent which Washington and Jefferson and Madison had visions would be the means of binding together with the strong bands of commerce the cis-and trans-Alleghanian countries." Chatburn, Highways and Highway Transportation, page 64.

Success of the Cumberland road to the Ohio created demands for its extension.[1] In conformity to this demand $10,000 was appropriated in 1820 to lay out a road from Wheeling to the Mississippi River near St. Louis. This continuation was for a road 80 feet wide and in spite of much congressional objection and occasional presidential vetoes, the road was pushed on; the last appropriation being made for a portion west of the Ohio, May 25, 1838. The exact total of all appropriations amounted to $6,824,919.33. The road proper reached southern Illinois. The average load carried by the wagons over the road was 6,000 pounds but loads weighing 10,000 pounds were frequently hauled over the road.[2] The wheels of the freighters were a size proportionate to the rest of the wagon. The first wagons used on the old roads had narrow rims, but it was not long before the broad rims, or "broad tread wagons," came into general use by those who made a business of freighting. The width of the broad tread wheels was four inches.[3]

A toll system was devised based on rates varying according to the wear on the road. Each animal or vehicle was taxed in proportion as it damaged the roadbed. Cattle were taxed twice as heavily as sheep or hogs, and, according to the tariff of 1845, hogs were taxed twice as much as sheep. The tariff on vehicles was determined

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[1]In his last message to the Congress President James Madison invited attention "to the expediency of exercising their existing powers and, where necessary, of resorting to the prescribed mode of enlarging them, in order to effectuate a comprehensive system of roads and canals, such as will have the effect of drawing more closely together every part of the country, by promoting intercourse and improvements and by increasing the share of every part of the common stock of national prosperity." Richardson, Messages and Papers.

[2]Searight, The Old Pike, page 119.

[3]Hulbert, The Old National Road, page 85.

by the width of the tires used, for the narrower the tire the more the roadbed was cut up. Wide tires were encouraged, those over six inches (later eight) went free, serving practically as rollers.[1]

While the passenger traffic on the Old National Road was very extensive, it played the same relation to the freight traffic as passenger traffic does to freight on the modern railway—a small item, financially considered. It was for the great wagons and their wagonners to haul over the mountains and distribute throughout the West the products of mill and factory and the rich harvests of the fields.[2]

The greatest blessing of the National Road was the splendid era of national growth which it hastened. It became a highway for the products of the factories, the fisheries and the commerce of the eastern states. It was one of the great strands which bound the nation together in early days when there was much to excite animosity and provoke disunion.[3]

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[1]Hulbert, The Old National Road, page 66.

[2]Hulbert, The Old National Road, page 84.

[3]On June 6, 1832 the commercial importance of this road was alluded to in Congress by Hon. T. M. T. McKennan, when he said:

> "It is, sir, *a great commercial, military, mail, national work.* To give the House, or those of its members who are unacquainted with the fact, some idea of the immense commercial advantages which the eastern as well as the western country has derived from the construction of this road, let me call their attention to the amount of merchandise transported to the Ohio River in a single year after its completion; and here, sir, I avail myself of an estimate made by an honorable member of the other House on another occasion, when he strongly urged the propriety and importance of the extension of the road through the State of Ohio.
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> "In the year 1822, shortly after the completion of the road, a single house in the town of Wheeling unloaded 1,081 wagons, averaging about 3,500 pounds each, and paid for the carriage of the goods $90,000. At that time there were five other commission houses in the same place, and estimating that each of

Civilization paused but for a moment on the Atlantic seaboard and merely awaited the opening of the National Road. At a critical period in the history of the United States the National Road served the nation well. The population of the three States west of the Ohio through which the National Road ran increased from 783,635 to 3,620,314 in the generation the road was in active use before the advent of railways. The average increase of percentage of permanent population for the first decades in these States was over 182 per decade. In the second decade of the century Indiana's population increased over 500 per cent. The States north and south of the great highway knew little of this marvelous advance. The percentage of increase of population of Virginia decreased 2 per cent, while Indiana and Illinois increased over 300, Kentucky's percentage of increase decreasing 45.[1] The building of the National

them received two-thirds the amount of goods consigned to the other, there must have been nearly 5,000 wagons unloaded, and nearly $400,000 paid as the cost of transportation. But, further, it is estimated that at least every tenth wagon passed through that place into the interior of Ohio, Indiana, etc., which would considerably swell the amount. These wagons take their return loads and carry to the eastern markets all the various articles of production and manufacture of the West—their flour, whiskey, hemp, tobacco, bacon, and wool. Since this estimate was made, the town of Wheeling has greatly enlarged; its population has nearly doubled; the number of its commercial establishments has greatly increased; and the demand for merchandise in the West has increased with the wealth and improvement and prosperity of the country.

"But, further, sir, before the completion of this road from four to six weeks were usually occupied in the transportation of goods from Baltimore to the Ohio River, and the price varied from six to ten dollars per hundred. Now they can be carried in less than half the time and at one-half the cost, and arrangements are in making by some enterprising gentlemen of the West to have the speed of transportation still increased, and the price of carriage diminished." Searight, The Old Pike, page 107.

[1]Hulbert, The Old National Road, page 8.

Road was undoubtedly one of the influences which secured the West to the Union.

In 1838 when the road had reached Southern Illinois a new element entered the industrial world—the successful competition of the railroads. The building of national highways ceased, canal and river transportation were practically put out of business, and for more than sixty years interstate transportation of commodities by highways was unsubstantial.[1]

Lapse of National Interest and Desuetude of Interstate Transportation by Highway.

For approximately sixty years after the coming of the railroads, national interest in the development of interstate highway transportation was dormant. Such transportation itself was unsubstantial and practically non-existent. The expanding development of the nation into the Far West followed the lines of the transcontinental railroads. In the earlier settled parts of the country, too, and especially in the South, communities grew and flourished only if served by these steel lines of transport. But the Pacific Ocean and international boundaries barred the expansive growth of the nation and its growth thenceforward has been inward and interspatial. Communities grew up perforce away from the rail lines, and the transportation needs of

[1]During the heyday of the National Road other interstate roads were busy with the carriage of freight. Various States sought appropriations for these roads, but the more important attempts were vetoed. Jackson, in 1830, vetoed a bill authorizing a subscription by the United States for stock in the Maysville, Washington, Paris, and Lexington Road Company, incorporated in Kentucky, to build a road from the Cumberland Road at Zanesville, Ohio, to Florence, Alabama, on the Tennessee River. A census taken of the existing road showed an average daily traffic of 351 persons, 33 carriages and 51 wagons. Chatburn, Highways and Highway Transportation, page 67.

older rail-served communities began to demand transportation service auxiliary and supplementary to that by rail.[1]

With the turn of the century the new transportation needs of the country nursed the newly developed instrument of commercial transportation, the automobile.

The Modern Renaissance of National Interest and National Participation in the Development of Interstate Transportation by Land Highways.

After a lapse of interest extending over half a century the Federal Government re-entered the field of highway transportation in 1893, first as an educator and adviser to the various States in the science of building good roads, subsequently as a direct participant with the States in financing and integrating a National system of interstate highways, and finally in 1935, in the enactment of Part II of the Interstate Commerce Act (Motor Carrier Act, 1935) assumed plenary responsibility for regulating and promoting the business of interstate commercial highway transportation.

A brief consideration of this history is essential to a proper understanding of the burden which will be inflicted upon interstate commerce by the enforcement of the South Carolina regulations.

Federal Co-operation with the States in Building the Present National System of Interstate Highways.

In 1893 the Office of Road Inquiry was created by the Secretary of Agriculture, under provision of the Ap-

[1]It has been estimated that by 1935, the date of the passage of the Motor Carrier Act, 40 per cent of all communities of the nation and 7,844,509 and 6.3 per cent of the total population, were without railroad service. Automobile Facts and Figures, 1936 Edition. Automobile Manufacturers' Association.

propriation Act for the Department of Agriculture for the fiscal year 1894.[1]

As early as 1903 the subject of Federal aid to State highway work was introduced in the House of Representatives by Walter Brownlow, of Tennessee. In the course of his address Representative Brownlow observed:

> "While the Nation has made more progress than any other nation in the world during that time (last half of nineteenth century) it is a remarkable fact that it is behind all other civilized nations in reference to the improvement of its highways. It seems that by the former policy (direct construction as illustrated by Cumberland Road development) the Government did too much and by the latter policy (nonparticipation) it does too little. There should be a middle ground between those two extremes which would conform to the composite nature of our Government and have a tendency to distribute more equitably its burdens and benefits."

In 1912 a relatively small appropriation of $500,000 was made for the improvement of roads then being utilized and which in the future might be utilized for rural mail delivery, provided that this sum should be matched by the State in double the amount applied by the Government for such improvement. In this year a joint congressional committee was named to " . . . make inquiry into the subject of Federal aid in the construc-

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[1] 28 Stat. L. 264, 266. Providing that the Secretary should "... make inquiries in regard to the system of road management throughout the United States, to make investigations in regard to the best methods of road making, for traveling and other necessary expenses and for preparing, printing and publishing bulletins and reports on this subject for distribution and to enable him to assist agricultural colleges and experiment stations in dissemination of information on this subject, $10,000."

tion of post roads and to report at the earliest practicable date." This committee approached its task, which consumed almost two years' time, with serious mien and with prophetic insight. Prefatory remarks to the final report state that:

> "The committee undertook this inquiry with full appreciation of its magnitude. Believing that when the United States once entered decisively upon the policy of Federal aid that policy will never be abandoned, we have deemed it of the utmost importance that before any plan shall be adopted or any definite steps taken the subject shall be so thoroughly studied and all the points so carefully considered that the Government will not be carelessly committed to any policy which may lead to unsatisfactory results."

The public interest was identified at the outset with the transportation problem, for it was the view of the committee that:

> "Better, cheaper, and additional transportation facilities in the United States must benefit every inhabitant and result in more development and the greater production of financial resources, meaning more and cheaper food and necessities of life."

Highway transportation was visualized not in the role of an agency whose chief function was to supplement other forms of transport, but rather as an advance in the art of transportation, that is, as a medium which possessed specialized and distinct transport characteristics.[1]

In this connection the Committee observed:

> "Large areas of virgin territory must be developed, first by trail, then by road, next steam rail-

[1] Report to the Select Committee to Investigate the Executive Agencies of the Government, No. 12, p. 7.

> road, then electric lines, and finally by a system of intelligently and honestly constructed and maintained wagon roads which in this petrol age with its motor trucks and passenger bus should vastly increase the happiness, prosperity, and comfort of our people and double the value of our agricultural land. A great system of rural transportation would be developed with rates regulated by actual competition open to poor and rich alike, as no expensive and privately owned terminals, roadbeds, tracks, or equipment would be required. The good wagon road would be open everywhere to the use of everybody and the equipment, relatively inexpensive, would be within the means of many."

The Federal Aid Road Act (39 Stat. L. 355) approved July 11, 1916, was the outgrowth of these studies of the Federal Government in the highway field and of public agitation for government funds for highway development. This act (1) appropriated 75 million dollars to be expended over a 5-year period by the Secretary of Agriculture in cooperation with the various States. Funds so appropriated could be applied in the discretion of the Secretary to any roads '. . . over which the United States mails are, or may hereafter be, transported'; (2) it provided an arithmetic formula for the allocation among the various States of total funds available; (3) it conditioned the eligibility of States for Federal-aid funds upon the existence of State highway departments; (4) it enabled the Federal Government to protect its investment in Federal-aid roads by withdrawing future aid from States which failed to maintain these roads according to specified standards; (5) it incorporated the matching system by requiring the State to bear at least one-half the cost of every Federal-aid project; (6) it empowered the Secretary of

Agriculture to make all necessary rules and regulations for carrying out the provisions of the act.

It was provided that "No money apportioned under this Act to any State shall be expended therein until its Legislature shall have assented to the provisions of this Act." By the close of the fiscal year 1917 every State in the Union had given adequate assent to the terms of the Act.[1]

An appraisal of the results and effects of the first year and a half of Federal aid is found in the Report of the Director of the Office of Public Roads and Rural Engineering, 1917:

> "The Federal Aid Road Act marked a long advance in Federal policy covering the improvement of the public highways. For more than 20 years the efforts of the Federal Government had been restricted to research and education for the purpose of developing improved methods of road construction and maintenance and imparting useful knowledge along these lines to local road builders. . . .

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[1] Report of the Director of the Office of Public Roads and Rural Engineering, 1917, page 1.

The assent of the State of South Carolina was given as follows:

ASSENT TO ACT OF CONGRESS—COMPLIANCE THEREWITH.

The assent of the State of South Carolina is hereby given to the terms and provisions of an Act of Congress approved July 11, 1916, entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads and for other purposes," and acts amendatory thereof; that the State Highway Department is hereby empowered and directed to have prepared, and submit all such plans, specifications and data relating to the construction of roads and bridges as may be required under the terms of this chapter; to enter into all contracts with the United States Government and to do any and all things necessary to carry out the provisions of said Act of Congress; and the good faith of the State is hereby pledged to provide sufficient funds to meet the requirements of said Act, so as to acquire the benefits thereof. Civ. C. '22 3065; 1917 XXX 320; 1920 XXX 1, 1072.

> The most important outcome of this Federal legislation was the enactment of State laws providing effective State control of a large measure of road work, making funds available to meet the Federal appropriations, systematizing the work so that there might be definite and correlated results instead of haphazard construction, and finally, strengthening very greatly the States' participation in road maintenance. At the time the Federal Act was passed, the States of Delaware, Georgia, South Carolina, Indiana, Texas and Nevada had no semblance of State highway department. By the close of the fiscal year 1917 every State in the Union had a State Highway Department within the meaning of the Federal Aid Road Act and had given adequate assent to the terms of the Act.
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> . . . From an engineering and construction standpoint one of the results of the Federal Act and of the rules and regulations has been a standardization of form and arrangement for highway plans and specifications. This should in time prove of great value, not only to the Federal Government, but to the States, by way of encouraging simplicity and standardization."

Comparing the magnitude of the early Federal-aid program with the entire highway program of the United States, the significance of Federal-aid is indicated by the fact that the amount of Federal money allotted to projects actually under construction at the end of the fiscal year 1920, *i. e.,* $103,925,094., was only slightly less than the total expenditure of $106,861,053. from State funds for highway construction during the year 1919.[1]

While the Act of 1916 placed a powerful device in the hands of the Federal administrative agency by au-

[1]Report of the Chief of the Bureau of Public Roads, 1920, p. 6.

thorizing it to determine the three vital elements in highway development, *i. e.,* (1) location of projects, (2) physical specifications, that is, type of surfacing, width, strength, elevation, curvature, etc., and (3) priority of projects, it soon became apparent that there were vital defects in the 1916 Act which impeded the development of a uniform and inter-connected system of interstate highways. In the report of the Chief of the Bureau of Public Roads, 1919, he pointed out that the post road requirements handicapped seriously State use of Federal funds.

> "Anyone who is familiar with the rural free delivery routes as now laid out knows that the mail carrier pursuing his zig-zag route does not in many cases follow throughout their length those roads on which traffic is concentrating more and more and which must therefore receive the first attention from the State road authorities." Report of the Chief of the Bureau of Public Roads, 1919.

The Post Office Appropriation Act of Feb. 28, 1919, broadened the definition of rural post roads so as to include the roads over which main traffic might travel. Another vital defect in the 1916 Act was that it did not limit the original State selection to any specified class of road, or to any defined portion of total state mileage. Early in the administration of the 1916 Act it became apparent that something more definite than administrative disapproval of projects selected by States was required if Federal aid was to be effective in guiding individual State activity in the general direction of a connected and uniform road system. At the December meeting of the American Association of State Highway Officials, composed of the administrative and executive officers of all the State Highway Departments,

resolutions were passed urging "that the application of Federal-aid funds be made *to those highways which will expedite the completion of an adequate national system.*[1]

Another defect in the 1916 law arose with regard to maintenance. In the years following the passage of the 1916 Act the Bureau of Public Roads experienced difficulty with the States in the maintenance of the Federal-aid roads. It became necessary to place some States on definite notice that projects were in need of repair and that unless they should be placed in a satisfactory condition within four months no further projects would be approved by the Secretary of Agriculture, and in his Report for the year 1920 the Chief of the Bureau of Public Roads observed:

> "It is reasonable to suppose that with the number of completed projects rapidly increasing there will hereafter be an increasing number of cases of unsatisfactory maintenance," and urged that: "Provision should also be made for the use of Federal funds under the supervision of the Secretary of Agriculture in case a State is dilatory in giving proper attention after notice. . . If it be also provided that no further projects shall be approved in the State until such costs are refunded the tendency will be to avoid the necessity for Federal intervention."

In 1921 the Federal Aid Road Act was amended so as to cure these vital defects. This Act (42 Stat. L. 212), entitled the Federal Highway Act, and approved November 9, 1921, gave purpose and direction to future Federal co-operation with the States and has been

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[1] Report of the Chief of the Bureau of Public Roads, 1920, page 18.

the basic law under which the present interstate connected system of highways has been developed.

It provided (Section 6) that in approving projects to receive Federal aid preference should be given *"to such projects as will expedite the completion of an adequate and connected system of highways interstate in character"*. It specified that the Secretary of Agriculture in co-operation with each State Highway Department should designate a system of highways not exceeding 7 per cent of the total mileage in each State. Application of Federal funds was to be limited to this designated system. Moreover, the make-up of the 7 per cent system was specified by law as follows: the important interstate highways constituting the State primary highway systems could not account for more than three-sevenths of the total mileage of the designated 7 per cent system. The remainder was to be comprised of secondary or inter-county highways. State highway departments were given authority initially to select the mileage to constitute the system, but final approval of the designated system was placed in the hands of the Secretary of Agriculture. (Section 6)

Thus by these provisions it was made certain that the Federal moneys expended in the future would not be dissipated over the State systems without regard to the needs of an interstate system of highways. While by Section 12 of the Act it was provided that the construction and reconstruction of the highways and all contracts, plans, specification, and estimates relating thereto should be undertaken by the State Highway Departments, subject however to the approval of the Secretary of Agriculture, it was provided by Section 8:

> "That only such durable types of surface and kinds of materials shall be adopted for the construction and reconstruction of any highway which is a part

> of the primary or interstate and secondary or intercounty systems as will adequately meet the existing and probable future traffic needs and conditions thereon. The Secretary of Agriculture shall approve the types and width of construction and reconstruction and the character of improvement, repair, and maintenance in each case, consideration being given to the type and character which shall be best suited for each locality and to the probable character and extent of the future traffic,"

and in order to correct the defect of the 1916 Act as to maintenance, by Section 14 it was provided:

> "That should any State fail to maintain any highway within its boundaries after construction or reconstruction under the provisions of this Act, the Secretary of Agriculture shall then serve notice upon the State highway department of that fact, and if within ninety days after receipt of such notice said highway has not been placed in proper condition of maintenance, the Secretary of Agriculture shall proceed immediately to have such highway placed in a proper condition of maintenance and charge the cost thereof against the Federal funds allotted to such State, and shall refuse to approve any other project in such State, except as hereinafter provided.
>
> Upon the reimbursement by the State of the amount expended by the Federal Government for such maintenance, said amount shall be paid into the Federal highway fund for reapportionment among all the States for the construction of roads under this Act, and the Secretary of Agriculture shall then approve further projects submitted by the State as in this Act provided."

This provision is highly important in determining the purpose and legal significance of Federal aid. It

is effective expression of the determination of the Congress that Federal aid was not to be extended to the States without regard to the future permanency of the interconnected interstate highway system. It forestalled the possibility that any State might by abandonment or refusal to maintain the Federal aid highways within its borders disrupt the national highway system and destroy the national investment.

The administration of Section 14 of the Act is described by Thomas H. McDonald, Chief of the Bureau of Public Roads, in "The Bureau of Public Roads and Its Work, Revised, June 30, 1930:"

> "After the construction is completed, the road accepted, and the final payment made from the Federal Treasury, the Bureau still continues its interest. The Federal law requires that the State shall maintain the roads entirely at its own expense; and the Secretary of Agriculture is authorized and directed to enforce this requirement.
>
> To enable him to do so, all completed highways upon which the Federal funds have been expended are inspected by the district forces of the Bureau every six months. The reports of these expenditures are forwarded to the Division of Control. Where the reports indicate unsatisfactory maintenance conditions, that fact is brought to the attention of the State concerned. The State Highway Department is required to give prompt attention to the conditions noted, and the Federal law provides that, if it has not done so within 90 days after it has been notified, the Secretary of Agriculture must make the necessary repairs and charge the cost to the State's apportionment of Federal aid. The Secretary is also required to suspend all further Federal payments to the State until the amount thus spent has been refunded by the State; and when it is refunded *he is required to reappor-*

> *tion it among all the States.* The offending State would thus lose all but its pro-rata portion.
>
> It is significant of the prompt and careful attention given to the maintenance of the Federal-aid roads by the States, that in no State has it yet been necessary to enforce this drastic provision of the Federal law."

By Section 18 it was provided:

> "That the Secretary of Agriculture shall prescribe and promulgate all needful rules and regulations for the carrying out of the provisions of this Act, including such recommendations to the Congress and the State highway departments as he may deem necessary for preserving and protecting the highways and insuring the safety of traffic thereon;"

and specific provision was also made for the conduct of Federal research (Section 21) independently or in co-operation with the State Highway Departments.

The foregoing constitute the basic statutory provisions under which Federal-aid highway policy has been administered from 1916 to the present time. There have been numerous adjustments in detail but the fundamental principles have remained unaltered with the exception of the recent abandonment of the dollar for dollar matching principle which prior to the "emergency" period had constituted the foundation of Federal-aid policy.

The report of the Committee on Post-offices and Post-roads to the 67th Congress, on June 20, 1921, which preceded the enactment of the Federal Highway Act of 1921, entitled "Continuation of Federal Aid in the Construction of Highways," was an eloquent herald of the new era of national participation in in-

terstate highway construction and promotion of highway transport which was inaugurated by the Federal Highway Act of 1921. It read in part:

> "A new era in transportation confronts the United States. An evolution of far-reaching social, political, and industrial importance has been effected through the constantly growing use of highway transport. The modern motor vehicle has rendered obsolete old methods of highway construction, maintenance, and administration. The question is no longer local alone in application; it is national. Obviously our highway policies must be broadened and strengthened to meet this changed condition if public expenditures are to be conserved and the best interests of the Nation cared for. Living costs can be reduced, our defense strengthened, and a new spirit of nationalism created if we use intelligently this new means of communication between communities and States.
>
> "President Harding in his first message to Congress, delivered Tuesday, April 12, 1921, recommended the strengthening of laws governing Federal aid for road construction. In the course of his message he made the significant statement that the principle of Federal aid had been 'acceptably established, probably never to be abandoned.' The President's recommendation concerning highway development is given below:
>
> 'Transportation over the highways is little less important (referring to the railways), but the problems relate to construction and development, and deserve your most earnest attention, because we are laying a foundation for a long time to come, and the creation is very difficult to visualize in its great possibilities.
>
> "The highways are not only feeders to the railroads and afford relief from their local burdens, they are actually lines of motor traffic in inter-

state commerce. They are the smaller arteries of the larger portion of our commerce, and the motor car has become an indispensable instrument in our political, social, and industrial life.

"There is begun a new era in highway construction the outlay which runs far into hundreds of millions of dollars. Bond issues by road districts, counties and states amount to enormous figures, and the country is facing such an outlay that it is vital that every effort shall be directed against wasted effort and unjustifiable expense.

"The Federal Government can place no inhibition on the expenditure in the several states; but, since Congress has embarked upon a policy of assisting the states in highway improvement, wisely, I believe, it can assert a wholly becoming influence in shaping policy.

"With the principle of Federal participation acceptably established, probably never to be abandoned, it is important to exert Federal influence in developing comprehensive plans looking to the promotion of commerce and apply our expenditure in the surest way to guarantee a public return for money expended.'

"The need for a national policy that will develop a connected and correlating system of public highways that will adequately serve the requirements of the whole country and reduce the cost of transportation between producer and consumer, a system that will supplement our great railroad and water transportation, is apparent to every student of this question."

The basic Federal-aid Acts reveal that the Federal Government had abandoned the policy under which it operated during the first half of the nineteenth century. It did not undertake to construct and control national highways, as an exclusive Federal function, despite the fact that the classic constitutional debate over the

power of the Federal Government to construct internal improvements which had embarrassed the first era of national participation had long since been settled by decisions of this Court in favor of the National Government. From 1862 to 1872 four transcontinental railroads had been incorporated by the Federal Government—The Union Pacific, 12 Stat. 489 (1862), the Northern Pacific, 13 Stat. 365 (1864), Atlantic & Pacific, 14 Stat. 292 (1866), and the Texas & Pacific, 17 Stat. 59 (1872). In chartering the latter two companies the Congress did not stipulate that the consent of the States should be secured, and it authorized these companies to exercise the power of Eminent Domain. In *California* v. *Central Pacific RR.*, 127 U. S. 139, (1888) this Court upheld the power of Congress in this regard, Mr. Justice Bradley saying:

> "The power to construct or to authorize individuals or corporations to construct, national highways and bridges from State to State, is essential to the complete control and regulation of interstate commerce . . . This power in former times was exerted to a very limited extent, the Cumberland or National Road being the most notable instance. Its exertion was but little called for, as commerce was then mostly conducted by water, and many of our statesmen entertained doubts as to the existence of the power to establish ways of communication by land. But since, in consequence of the expansion of the country, the multiplication of its products, and the invention of railroads and locomotion by steam, land transportation has so vastly increased, a sounder consideration of the subject has prevailed and led to the conclusion that Congress has plenary power over the whole subject."

Instead it entered upon a co-operative undertaking with all the States for the development of a national

inter-connected and interstate highway system which would be doubly valuable because it would be integrated with the various State systems and local feeder and secondary highways.

The most important problem which confronted the administrators of the Federal-aid Act of 1921 was the selection of the 7 per cent of the roads of the Nation which were to receive Federal-aid in the "completion of an adequate and connected system of highways interstate in character." In his report for the year 1923, at pages 2 and 3, the Chief of the Bureau of Public Roads describes the progress of this important function as follows:

> "DESIGNATION OF THE FEDERAL-AID HIGHWAY SYSTEM.
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> The work of selecting the roads to constitute the Federal-aid highway system, begun during the preceding fiscal year, was continued with all possible expedition consistent with the far-reaching importance of the decisions involved. By the close of the year tentative systems had been submitted by the State highway departments or proposed by the Bureau of Public Roads for all States.
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> As the result of conferences with officials of the several States and groups of States, 35 of these systems had been definitely approved by the Secretary at the close of the fiscal year, and it was anticipated that the systems of the remaining States would be approved by the fall of 1923.
>
> The total mileage of highways existing in the United States at the time of the passage of the Federal highway act (Nov. 9, 1921), as certified by the State highway departments, was 2,859,575 miles. The maximum mileage that can be included in the system for the whole country, being 7 per cent of the total mileage, is 200,170 miles. The mileage included in the 35 systems approved up to the end

of the fiscal year was 111,699 miles; and as the permissible 7 per cent of existing mileage is, in general, not being included in the system as initially approved, it is not likely that the initial program will include more than 180,000 miles.

Analysis of the approved systems for the 35 States shows that of the 1,111 cities of 5,000 or more population in these States, 1,048 of them lie directly on the approved system, and there is probably not one but will be connected with the system by an improved State or county road. When the system is completed, therefore, one will be able to travel from any town of 5,000 population or greater to any other town of the same size without leaving an improved road.

The detailed study of the availability of the roads to the total population indicates that for the country as a whole it is safe to say that fully 90 per cent of the total population resides not more than 10 miles from the roads included in the system. In individual States the percentage runs almost to 100 per cent; for example, Maryland, in which fully 97½ per cent of the people live within a 10-mile zone on each side of the roads, and Indiana, in which less than 1 per cent lives farther than 10 miles from the roads.

A road of the approved system will cross the western mountains at practically every one of the important passes. The Rockies will be crossed at Berthoud, Lookout, Gibson, Targhee, Pleasant Valley, and Reynolds Passes in Montana and Idaho; La Veta, Wolf Creek, and Red Mountain Passes in Colorado and Raton Pass on the Colorado-New Mexico line. The Cascade Range will be crossed at Stephens and Snoqualmie Passes in Washington and Grants Pass in Oregon, and the Sierra Nevadas will be crossed at Truckee and Walker Passes in California. These passes are the controlling points on the transcontinental routes westward. They are the passages through which

the national roads must cross the mountain barriers. Leading to them from the east and west the roads of the Federal-aid highway system will form a perfect network of interconnected highways branching into every section of the country.

In designing the routes to be included in the Federal-aid system, the chief aim of the States and the Federal agency has been to select routes which will give the maximum of local service and connect with one another to form a great national system of highways."

By 1926 this program was well on its way toward completion:

"The highways included in the system now have an aggregate length of 182,134.8 miles. All have been selected by the constituted State and Federal highway officials as essential links of a system adequate for the accommodation of interstate traffic. Naturally there are degrees of importance even among these selected roads, but compared with the 3,000,000 miles of other highways in the country they are the most important of the Nation's highways and their improvement is absolutely essential for the proper accommodation of interstate highway traffic.

It is entirely consistent with the interests of the Federal Government to participate in the improvement of every mile of the designated system, but that will not be necessary. With negligible exceptions the roads included in the Federal aid system are also parts of the several State highway systems. This is inevitable from the fact that important interstate roads are almost invariably essential state arteries also; and because of its importance to the States a very considerable mileage included in the system had already been improved prior to its designation." 1926 Report of Chief of Bureau of Public Roads, pp. 30-31.

Contrasting the aims under the Federal-aid Act of 1921 with the lack of purpose existing prior thereto, the Chief of the Bureau of Public Roads, in his annual report for 1926, page 31, stated:

> "Ten years ago when the Federal-aid plan was adopted there were only five states in which there was a single improved trans-state highway. They were Massachusetts, Connecticut, New York, New Jersey and Maryland, all eastern states and all of that small group in which the movement for better roads was begun in the 90's. In sixteen states there was then no state highway department, nor the semblance of a plan for development of through routes across the States, and even of those states in which a recently created state agency was feeling its way toward a more scientific and business-like administration of state highways there were few in which the conception of a connected state highway system had yet been clearly apprehended. . . . *It is the primary purpose of the Federal Aid road legislation to expedite the continuous improvement of such cross-state highways in all states and finally to provide a completely articulated system of main interstate highways for the nation. The goal, as represented by the Federal aid highway system, is clearly defined and progress toward it has proceeded for the last five years, at least, without deviation.*"

Between 1916 and October 31, 1936, the Federal Government had paid to the various States the sum of $2,197,634,970.13 and about $500,000,000 had been apportioned, but not paid out (R. 137, 252) for the development of the designated Federal aid system. Far over half of this total sum has been paid to the States during the decade between 1926 and 1936. Thus of the $29,741,137.63 paid by the Federal Government to the State of South Carolina between 1916 and October 31,

1936, over $20,000,000, or more than 70 per cent was paid during the decade between 1926 and 1936.

As a result of this tremendous national investment and combined State and Federal efforts this nation now possesses a national system of improved and interconnected interstate highways, which, from the standpoint of physical characteristics, now permits the relatively unimpeded movement of interstate transportation.[1]

In 1935 by its decision in the case of *Nashville, etc. R. Co.* v. *Walters,* 294 U. S. 405, 417, this Court had occasion to recognize and give definite legal significance to the functional character of the highways composing the national interstate system built up under the Federal Highways Acts. Holding that the functional character of a highway had definite legal significance in determining the power of a State to command a railroad to aid in the construction of an underpass located on such highway, this Court thus described the functional character of Federal aid highways:

> " 'The state highways of Tennessee (as distinguished from county and city roads and turnpikes) have their origin in the federal aid highway legislation. The aim of that legislation is "a connected system of roads for the whole Nation"; "to provide complete and economical highway transport throughout the Nation"; to furnish "a new means of transportation no less important to the country as a whole than that offered by the railroads"; to establish "lines of motor traffic in interstate commerce."

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[1] "Government Activities in the Field of Transportation," Report No. 12 of Select Committee to Investigate Executive Agencies of the Government pursuant to Senate Resolution No. 217 (74th Congress) 1937, page 12.

In the exercise of the power conferred upon the Secretary of Agriculture by Section 8 of the Federal Highway Act of 1921 "to approve the types and width of construction and reconstruction and the character of improvement, repair, and maintenance" of the highways in the 7 per cent system, and in obedience to the mandate of Section 6 to "give preference to such projects as will expedite the completion of an adequate and connected system of highways, interstate in character," the Bureau of Public Roads has successfully obtained substantial uniformity in design and capacity for the main interstate highways connecting the nation. The standard of weight capacity adopted by the Bureau was 16,000 pounds per axle for high pressure and 18,000 pounds per axle for low pressure pneumatic tires (or 8,000 and 9,000 pounds per wheel) and it was for these capacities that the Bureau has designed the main highways in the interconnected interstate system.[1]

In 1934 the Bureau of Public Roads, under authority contained in the Federal Highway Act, 1921, published a "Uniform Act Regulating Traffic on Highways," as revised and approved by the Fourth National Conference on Street and Highway Safety, May 23-25, 1934, which was recommended for adoption by all the States (R. 275). By Section 145 thereof (R. 277) wheel loads not in excess of 8,000 and 9,000 pounds and axle loads not in excess of 16,000 and 18,000 pounds are recommended, depending upon whether high pressure or low pressure pneumatic tires are used.[2]

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[1] Testimony of Thomas H. McDonald, Chief, U. S. Bureau of Public Roads, before the Interstate Commerce Commission, Docket No. 23400.

[2] Appellants (S. C. Br. 17) attempt to minimize the significance of these recommendations by italicizing the phrase "*should not*

As will be seen from the Table of States printed under Section II, subsection B, of this brief, all save a small number of the 48 States had either prior to this recommendation or pursuant thereto, enacted legislation in substantial conformity with its terms.

The Transportation of Commodities over the Interstate Highways

In pace with the development of the national system of interstate highways has been the revival of interstate transportation of commodities over the land highways, and today that transportation is playing a part in the nation's development and civilization even greater than it played in the early decades of the Republic. The transportation of passengers over the land highways has also kept pace with the development of the roads, but that commerce is not affected by the regulations in issue and need not be described here.

Accurate statistical knowledge is not yet available as to the extent of the interstate transportation of commodities over the highways, but existing estimates indicate its scope and importance.

In Coordination of Motor Transportation, 182 I. C. C. 263, 400-406, the Interstate Commerce Commission estimated that in terms of ton-miles "intercity trucks" carried, during the year 1929, 4.2 per cent of the total domestic freight, excluding that moving in the coastwise and intercoastal trades. This represented 5.8 per cent of the ton-mile traffic of the railroads, and 18.3 per cent of rail traffic in terms of tons originated.

In the Second Report of the Federal Coordinator of

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exceed" which is employed in Section 145 of the proposed Uniform Act. However, when it is considered that Section 145, like the rest of the Uniform Act, was drafted in statutory terms for verbatim adoption, it is apparent that appellants' suggestion is of no force.

Transportation (1934)[1] it was estimated that during the year 1932, in terms of ton-miles "intercity trucks" carried 9.4 per cent of the total domestic freight and 23.8 per cent of the total tonnage originated, and (on page 18) it was stated that "an estimate of the aggregate volume of motor truck traffic handled outside the strictly local haulage area indicates that in 1932 truck traffic was about 44 per cent of rail in terms of tons originated, and 12.7 per cent in terms of ton-miles."

In Coordination of Motor Transportation, *supra,* at page 274, it was estimated that 20 per cent of all truck traffic is interstate.

The percentages of ton-mile, ton-originated, and proportionate interstate traffic thus estimated for the period 1929-1932, have undoubtedly increased in the past five years and especially since the Federal regulation and promotion of the industry under Part II of the Interstate Commerce Act (Motor Carrier Act, 1935).

While it is recognized that private transport constitutes the major part of all the highway transportation of commodities in the United States,[2] a fair estimate of the extent of the interstate motor truck transportation can be had from the census taken of motor trucking for hire in the United States for the year 1935 by the Bureau of the Census, published in its report of May, 1937, cited in the note below.

Indicative of the importance of interstate motor trucking for hire is the fact that, while only 8.7 per cent of the trucking concerns subjected to the census were primarily engaged in interstate commerce, 16.7 per

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[1] Senate Document No. 152, 73d Congress, 2d Sess., page 3.

[2] "Motor Trucking For Hire," Census of Business, 1935, Bureau of the Census, May 1937.

cent in intrastate, and 74.6 per cent in local operation, *in terms of annual revenue* (total for the nation $530,-860,000) local operators accounted for only 38.4 per cent of the total ($204,127,000), intrastate 24.7 per cent ($131,017,000) and interstate operators accounted for 36.9 per cent of the total ($195,716,000). Of the 61,216 for-hire concerns in the nation, 45,685 were local, 10,217 were intrastate, and 5,314 were interstate. Of the total of 188,809 vehicles for-hire in the nation, 49,848, or over 25 per cent, were used primarily in interstate commerce. Of the total of 21,440 tractors and 23,594 semi-trailers used in the nation, 11,288 tractors and 11,776 semi-trailers were used primarily in interstate commerce. Thus over 50 per cent of the tractor semi-trailer combinations in the nation were used in interstate commerce. In computing the number of vehicles, tractors and semi-trailers were counted as separate units. Therefore, of the 49,848 vehicles for hire used in interstate commerce, approximately 23,004 were tractor semi-trailer combinations, representing over 45 per cent of the total. These figures are of fundamental importance in this case, for as shown in subsection (B) of this Section, and in Section II of this brief, the enforcement of the South Carolina regulations will in effect bar the tractor semi-trailer from the interstate highways into, from and across South Carolina.

Concerns primarily engaged in interstate operation received 87.8 per cent of their total revenue from interstate, 7.4 per cent from intrastate, and 2.9 per cent from local trucking operations. Revenue of interstate operators from all sources amounted to $3,926 per vehicle, as compared to $2,120 for local and $3,069 for intrastate operators.

Federal Regulation and Promotion of Transportation over the Land Highways

The effects of the modern development of highway transportation upon the general structure of the transportation systems of the country made it inevitable that the Federal Government should not long delay placing it under Federal control and regulating it in the public interest.

Demand for this regulation came from various sources. It arose in States whose authorities had felt the urgency of control over the use of the highways and the inadequacy of state measures. It developed strongly in the course of time in the minds of railroad officials who sought to subject their motor vehicle competitors to regulation similar to that under which they functioned. It found willing advocates in the motor vehicle industry itself on the part of operators and their associations dissatisfied with the chaotic condition resulting from uncontrolled competition.[1] It was voiced by many shippers who preferred an ordered transportation system to the unstable and uncertain conditions which had developed in motor carrier transportation. It was advocated by the Interstate Commerce Commission,[2] and

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[1] Regulation of Transportation Agencies (S. Doc. 152, 73d Congress, 2d Sess. 1934, p. 25).

[2] The Interstate Commerce Commission had made two extensive investigations of the motor transport industry, *Motor Bus & Motor Truck Operation,* 140 I. C. C. 685, decided April 10, 1928, and *Coordination of Motor Transportation,* 182 I. C. C. 263, decided April 6, 1932. Out of each of these investigations grew recommendations for legislation. The Commission had also had occasion to consider the problem created by motor competition in two general investigations of the railroad rate level, *Fifteen Percent Case,* 1931, 178 I. C. C. 539, and *General Rate Level Investigation,* 1933, 195 I. C. C. 5.

by the Federal Co-ordinator of Transportation after exhaustive studies.[1]

After almost a decade of operation and study, Congress in the course of its 1935 session amended the Interstate Commerce Act to provide for extensive motor carrier regulation.[2]

The new Act by its terms became Part II of the Interstate Commerce Act.

Passage of the Motor Carrier Act paralleled in some respects the first regulation of railroads in 1887, in that it was adopted after extensive but ineffective regulation by the States which preceded the gathering and crystallization of sentiment sufficient to move Congress to act. By the time the Act was passed common carriers of passengers by motor vehicle were regulated in 47 States and the District of Columbia, common carriers of property in 42 States and the District, contract carriers of property in 31 States, and private carriers of property in 8 States. Regulatory laws were in effect in the principal foreign countries. There is further parallel in the way in which the experience of the States and of foreign countries in meeting the world-wide problem of motor transportation by highway was availed of in the formulation of the Federal statute. But the parallel cannot be pushed too far. The Interstate Commerce Act as originally passed took up only a few pages in the Statutes at Large and was a mere skeleton of the present act. It was experimental and was gradually expanded to its present form by a long series of amendments each of which was thought to be justified by practical experience in the operation of the statute.

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[1] Regulation of Transportation Agencies (S. Doc. 152, 73d Cong., 2d Sess. 1934).

[2] 49 Stat. L. 543, Short title, "Motor Carrier Act, 1935."

Part II of the Interstate Commerce Act presents a striking contrast; it does not represent a cautious and experimental approach to the regulation of common carriers by highway, but an ambitious and detailed scheme for the control of their operations in the public interest. Not only has the experience of the States and of foreign countries been drawn upon, but, more heavily still, the experience of the Federal Government itself in the regulation of the railroads. Many of the provisions are taken almost bodily from the Interstate Commerce Act. It is not going too far to assert that the portions of the Motor Carrier Act dealing with common carriers are modeled upon the Interstate Commerce Act with deviations from its provisions only where necessary to adapt this new statute to the special problems of highway transportation. Even with respect to contract carriers the statute sets up a rather well-rounded scheme of regulation, and there is experimental approach and tentative beginnings only in connection with private carriers. The primary object of the Act is to regulate common carriers by motor vehicle operating in interstate and foreign commerce, including both buses and trucks. They are subjected to a comprehensive scheme of regulation almost as extensive as the regulation of interstate railroads, which long has been in effect. Nearly every phase of their activity is brought under control: rates, tariffs, divisions, service, safety, security for personal injuries and property damage, accounts, security issues, extensions of line, purchase, control and consolidation, and the qualifications and maximum hours of employees.

Many of the provisions regulating common carriers by motor vehicle are likewise made applicable to contract carriers, including those relating to a uniform

system of accounts, records, and reports, qualifications and maximum hours of service of employees, safety of operation and equipment, consolidation, merger and acquisition of control, issuance of securities, and provisions of security for the protection of the public. The rates of contract carriers are also made subject to regulation, although not in the same way or to the same extent as in the case of common carriers. Maximum charges are not under the control of the Commission, but it is authorized to fix the minimum charge to be made by any contract carrier, whenever it finds that the existing charge contravenes the policy of the Act as declared in section 202(a).

A private carrier is subject to regulation only with respect to qualifications and maximum hours of service of employees and standards of equipment, and then only after a finding by the Commission that there is need therefor in the interests of safety of operation.

A far-reaching innovation in procedure was undertaken to avoid too much centralization of administration in Washington, to avoid the necessity for an undue enlargement of the forces of the Commission, and more effectually to secure the co-operation of the State commissions with their intimate knowledge of local conditions. It consists of a provision for reference, in the first instance, of a wide variety of matters to joint boards composed of representatives of the State commissions in the territory affected by the proceeding. Where not more than three States are involved, the reference to a joint board is mandatory, and where more than three States are involved, it is discretionary. The classes of cases in which such reference is to be made are those involving applications for certificates, permits, or licenses, the

suspension, change or revocation thereof, applications for the approval and authorization of consolidations, mergers, and acquisitions of control or operating contracts, complaints as to violations by motor carriers or brokers of the requirements established under section 204(a) relative to service, safety, accounts, records, reports, qualifications and maximum hours of service of employees, and complaints as to rates, fares and charges of motor carriers, or the practices of brokers.

The Interstate Commerce Commission is given control over the inauguration and abandonment of service and is empowered to deny the use of the highways to applicants who propose to inaugurate new common carrier service (after June 1, 1935) if it finds that the "present or future public convenience and necessity" (Section 207 (a)) does not or will not require such service, and to applicants who propose to inaugurate new contract carrier service (after July 1, 1935) if it finds that such service is not or will not be consistent with the public interest and the policy declared in Section 202(a) of the Act. (Section 209(b))

However, and with special significance to the determination of the issue in this case, the Act is not merely one of regulation. The purpose of the Congress not only to regulate, but to promote and foster a national highway transportation system, is clearly and forcibly expressed in the declaration of policy (Section 202(a)). This purpose is expressed in concrete terms and tied into many provisions of the Act which refer to the statement of policy in Section 202(a) as the standard by which the Commission is to be governed. This declaration of policy is as follows:

> "It is hereby declared to be the policy of Congress to regulate transportation by motor carriers

> in such manner as to recognize and preserve the inherent advantages of, and foster sound economic conditions in, such transportation and among such carriers in the public interest; promote adequate, economical, and efficient service by motor carriers, and reasonable charges therefor, without unjust discriminations, undue preferences or advantages, and unfair or destructive competitive practices; improve the relations between, and coordinate transportation by and regulation of, motor carriers and other carriers; develop and preserve a highway transportation system properly adapted to the needs of the commerce of the United States and of the national defense; and cooperate with the several States and the duly authorized officials thereof and with any organization of motor carriers in the administration and enforcement of this part."

The Act provides by Section 206(a) that common carriers in bona fide operation on or prior to June 1, 1935, and by Section 209(a) that contract carriers in bona fide operation on or prior to July 1, 1935, may continue to so operate without obtaining certificates of public convenience and necessity, or permits, respectively. By February 12, 1936, the statutory deadline, 75,977 motor carriers of property, and 2,842 motor carriers of passengers had filed applications seeking these "grandfather rights."[1]

Since the enactment of the Motor Carrier Act the Interstate Commerce Commission has made rapid progress in organizing and regulating motor carriers in the public interest and the policy of Congress declared in Section 202(a) as above set forth has been progressively advanced. Already two volumes of motor car-

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[1] Fiftieth Annual Report of the Interstate Commerce Commission, November 1, 1936, page 70.

rier decisions have been completed and a third and fourth are being written.[1]

The legal pertinency to the issues in this case of the enactment and policies of the Motor Carrier Act is discussed hereafter in Section III(C) of this brief. The above discussion of the background, enactment and policies of the Act has been included in this section in order to identify and describe the interstate commerce which will be affected by the enforcement of the South Carolina regulations.

It demonstrates that a century after the first era of national participation in transportation over land highways the national government has re-entered the field of highway transport by cooperating with the 48 States in planning and building a national system of interconnected interstate highways adequate to carry the commerce which by the Motor Carrier Act it seeks to regulate, foster and promote in the public interest.

The Interstate Transportation of Commodities Over Land Highways in the South Atlantic Region Involving the Use of Interstate Highways Into, From and Across the State of South Carolina

In the development of the national interstate highway system and the growth of commercial highway transport over it, the South Atlantic region of the

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[1]Current appraisals of the Motor Carrier Act may be found in Michigan Law Review, Vol. 34, No. 1, Nov. 1935, page 37; Government Activities in the Field of Transportation, Report No. 12 to the Select Committee to Investigate the Executive Agencies of the Government, pursuant to Senate Resolution 217, 74th Cong., 1937, page 1-15; McCollester and Clark, Federal Motor Carrier Regulation, 1935; Report of the Special Committee of the Section of Public Utility Law of the American Bar Association, "To Appraise the Regulation Thus Far of Motor Vehicles by the Interstate Commerce Commission," 1937.

United States has played its full part. The District Court found upon abundant evidence (R. 65) that

> "Within the past decade there has been a great development of interstate commerce by truck, and a corresponding change and development of industry in the southeastern part of the United States based upon truck transportation. The market gardening industry, the textile industry, the fertilizer industry and many others have changed in large part their method of doing business as a result of the facilities afforded them by the use of trucks in interstate commerce."

and (R. 65-66):

> "The evidence establishes that South Carolina has the best highway system to be found in the southeastern part of the United States. There are within the state 60,000 miles of roads of all kinds, of which 5,948 miles are embraced in the State highway system. Of these, 2,417 miles are of standard pavement; and the arteries of interstate commerce to which we have referred are of this character with the exception of a few short lengths, as for instance 6 or 7 miles in highway No. 1 near Cheraw, out of a total length of the highway of 140 miles or more. The standard paving is not materially different from modern pavement used in most of the other states of the Union, is 18 or 20 feet in width, 7½ or 8 inches thick at the edges and 6 or 6½ inches thick at the center. It is capable of sustaining without injury a wheel load of 8,000 or 9,000 pounds and an axle load of from 16,000 to 18,000 pounds."

In the Census of Motor Trucking for Hire for the year 1935 [1] it was found that the relative importance of

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[1] Census of Business, 1935, Bureau of Census, May 1937, page 7.

concerns engaged primarily in local, intrastate, and interstate trucking varied considerably in different regions. The South Atlantic region was one in which interstate trucking was preponderant. Interstate truckers in that region did 53.8 per cent of all for-hire trucking. Of the total annual revenue of for-hire trucking in that region ($38,138,000) local trucking accounted for only $10,457,000, intrastate only $7,172,000, while the annual interstate revenue was $20,509,000. Of this total of $20,509,000 interstate revenue the proportionate share of the State of Florida was $1,032,000, Georgia $1,269,000, South Carolina $994,000, North Carolina $4,389,000, Virginia $3,727,000, and Maryland $6,626,000. However, the low interstate revenue for the State of South Carolina does not reflect the amount of interstate traffic on its highways, for by this census, revenue was allotted to States in which the home office of the company was located, and consequently much revenue collected from operations into, from and across the State of South Carolina was allotted by these figures to other surrounding states, notably North Carolina. Thus among the plaintiffs in this case are Barnwell Bros. Inc., Horton Motor Lines, Inc., National Convoy & Trucking Company, and Carolina Transfer & Storage Co., common carriers, and Akers & Hudson Motor Lines, Inc., contract carriers, with their principal offices in the State of North Carolina. The evidence showed that these plaintiffs were furnishing door to door delivery and daily direct service in interstate commerce throughout the East.

While the record shows that a great quantity of interstate truck traffic originates in and is destined for the State of South Carolina, it is also apparent from the geographical location of the State that large quan-

tities of interstate traffic originating in and destined for the States of Florida and Georgia must traverse the highways of South Carolina. The extent to which this is true for the State of Florida, is revealed in a study of Florida traffic conducted by the Florida State Road Department and the Bureau of Public Roads, from Sept. 1933 to Sept. 1934, extracts from which were published in "Public Roads", Volume 16, No. 4, June 1935, by the Bureau of Public Roads. It is stated therein that:

> "During the season of 1933-34 the interstate truck shipments aggregated 31,590 truck loads. These truck shipments were destined mainly to Georgia, South Carolina, Alabama, North Carolina, Tennessee, the District of Columbia, and Virginia, with the number of trucks in the above order. The States enumerated took about 88 percent of the total interstate truck shipments. In the total movement, all States east of the Mississippi River except the New England group and Delaware were represented, while west of the Mississippi only the States of Missouri, Arkansas, Texas, and Louisiana received truck loads of citrus fruits from Florida. Georgia and South Carolina accounted for more than half the total interstate citrus fruit shipments by truck. . . . "15 percent of the 215,000 outgoing trucks crossing the Florida State line during the year carried citrus fruits; 8 percent carried garden produce; 40 percent carried miscellaneous commodities; and 37 percent were empty. Figure 5 indicates the seasonal movement of these trucks and the shifting from citrus fruit hauling to the transportation of garden produce.
>
> U. S. 1, U. S. 17, and U. S. 41 were the major gateways through which these commodities moved, these three routes together carrying 82 percent of all citrus fruit shipped to other States by truck

and 82 percent of the interstate garden-produce shipments.

More than 80 percent of all trucks crossing the State border and carrying citrus fruit was registered in States other than Florida. Seventy-one percent of trucks carrying garden produce in interstate commerce was also registered in other States.

Fifty-two percent of all trucks used in the carrying of citrus fruit had capacities of 2 to 4 tons; 40.5 percent were in excess of 4 tons; while 7.5 percent had capacities up to and including 1½ tons."

The enactment of State laws barring interstate motor transportation between the North and the South—"The Second Mason-Dixon Line."

In the years 1931 and 1932 laws were enacted in the States of Kentucky, Tennessee and. South Carolina regulating the size and weight of motor vehicles whereby maximum gross weights far below the previous limitations were adopted, axle weights were to be ignored; tractor-semi-trailers were to be considered as one unit for the determination of gross weight. Thus, by a singular and curious coincidence a barrier, extending from the Atlantic Seaboard to the Mississippi River, was threatened which would bar the flow of interstate commerce by motor truck between the North and Middle West and the South. Among traffic men of the country the wall thus created around the borders of these States has been referred to sardonically as "the second Mason-Dixon line" (R. 155). The only avenue to the South is by way of the narrow gap in southwestern North Carolina where it is contiguous to the State of Georgia. The one road through this gap is "a narrow road, full of short curves and mountain climbs

which make it a very hazardous highway for trucks of any size to travel." (R. 216)

The barrier which the South Carolina regulations attempt to erect against traffic moving along the Atlantic Seaboard, the "Chinese wall" which the District Court referred to in its opinion (R. 75), is graphically apparent from Table I.

TABLE I.

PRACTICAL WEIGHTS AND WIDTHS OF CONVENTIONAL INTERSTATE MOTOR EQUIPMENT

Under Axle and Gross Weight Restrictions of States Along the Atlantic Seaboard

(For basis of adjustment, when made, between legal and practical limitation, See Note, Table of 48 States, Subsection B, Section II)

State	Legal Axle Weight in pounds	Practical Gross Weight in Pounds 4-wheel truck	6-wheel truck	Tractor Semi-trailer	Legal Width In inches
New York	22,400	36,000	44,000	45-50,000	96
New Jersey	Varies[1]	30,000	40,000	60,000	96
Pennsylvania	18,000	26,000	36,000	39,000	96
Delaware	18,000	26,000	36,000	40,000	96
Dist. of Col.	24,640	30,800	39,600	39,600	96
Maryland	NR	25,000	40,000	40,000	96
West Virginia	16,000	24,000	35,000	45,000	96
Virginia	16,000	24,000	35,000	35,000	96
North Carolina	18,000	24,000	40,000	40,000	96
South Carolina	NR	20,000	20,000	20,000	90
Georgia	17,600	22,000	39,600	39,600	96
Florida	T 500[2]	22,000	22,000	34,000	96

NR No regulation.

[1] 1400-17,200 pounds per wheel according to number and size of tires.

[2] 500 pounds per inch of tire width.

B. The Burden Imposed

The evidence of record and the Court's findings of fact are eloquent as to the disastrous burden which the enforcement of the South Carolina regulations will inflict upon this commerce. While appellants did not attempt to contradict this evidence and did not except

to the District Court's findings in this respect, they attempt (S. C. Br. 119, 120; Rd. Br. 89) to minimize its importance by calling this Court's attention to certain statistics set out in Defendants' Exhibit No. 13 (R. 272) which show that according to registration figures of the South Carolina Motor Vehicle Division, there are relatively only a very few vehicles of a registered capacity beyond the 20,000 pounds gross which will be permitted by the law. But that these registered figures do not reflect the true capacity of *interstate vehicles* using these roads is attested by every operator or shipper who took the stand, and upon abundant evidence the District Court found to the contrary, and the appellants did not except to these findings. Appellants' use of these registration figures ignores the fact, as shown throughout the evidence, that by far the greater number of vehicles using the interstate highways into, from, and across the State of South Carolina would be registered not in that State, but in North Carolina and other States where their owners are resident.

The findings made by the District Court to which the appellants took no exception are as follows:

> "7. That the interstate motor transportation industry has grown and developed in the past five years to be an established industry. That standard equipment operated by motor carriers in interstate commerce consists of trucks and tractor semitrailers, and that 85 per cent to 90 per cent of this equipment is 96 inches in width and weighs more than 20,000 pounds gross; that enforcement of the South Carolina law would result in the obstruction of the flow of interstate commerce into, out of, and across the State of South Carolina because it would necessitate the transferring of commodities to and from trucks of the size and weight prescribed by said law, with a consequent increase in

the cost of interstate transportation and discrimination against South Carolina shippers and others shipping into and across South Carolina, and would render it practically impossible for a large part of interstate commerce now conducted by truck to use the roads of that state." (R. 78.)

"8. That weight and size of motor trucks are important factors in the fixing of interstate rates and that enforcement of the South Carolina law under consideration would necessitate increase of rates for transportation of commodities into, out of, and across South Carolina, would prevent the interchange of motor truck equipment and the establishment of through routes and joint rates on shipments moving into, out of, and across South Carolina." (R. 78.)

"9. That the development of motor truck transportation has been of great benefit to the textile industry because it has permitted manufacturers to supply customers with commodities in smaller quantities at more frequent intervals, without increased cost, and the customers' demand for this service necessitates the use of motor trucks. That the standard motor trucks supplying this service are 96 inches in width and when properly loaded weigh more than 20,000 pounds gross. That enforcement of the South Carolina law would cause delay in transit and increase the cost of interstate transportation of textiles into, out of and across the State of South Carolina and would result in discrimination against South Carolina textile mills in favor of competitors in other states." (R. 78.)

"10. That the continued operation and development of large-scale truck farming and the shipping of vegetables out of South Carolina in interstate commerce is dependent upon the peculiar service rendered by motor trucks in the transportation of

produce from roadside farms to large and distant markets quickly and economically. That truck farmers and vegetable growers depend, for interstate transportation of their produce, on motor trucks operated not by the farmers themselves but by transportation companies whose trucks move about the country with the seasons. That these trucks, and particularly the refrigerator trucks upon which the farmers depend for shipment of perishables, exceed the size and weight limitations prescribed by the law of South Carolina. That enforcement of the said law would discriminate against South Carolina truck farmers and vegetable growers in favor of their competitors in other states and would injure if not destroy this industry in South Carolina." (R. 79)

"11. That a large amount of fertilizer is shipped out of South Carolina in interstate commerce by motor truck and delivered to farmers at the field for immediate use; that this service cannot be rendered by other transportation agencies; that the product has a low value in proportion to weight, and enforcement of the South Carolina law would increase the cost of fertilizer to consumers and jeopardize the fertilizer industry in South Carolina." (R. 79).

"12. That interstate movement of household furniture and effects by motor truck has developed with the advent of good roads; that railroads do not offer adequate service and do not compete with trucks in this business; that because of the weight and bulk of furniture it is necessary that loads exceed the size and weight limitations prescribed by the law of South Carolina; that enforcement of the South Carolina law would increase the cost and curtail the efficiency of this service to the public." (R. 79)

"13. That the business of shipping lumber in interstate commerce from mills in South Carolina

has developed with the advent of good roads and motor trucks; that motor transportation enables the mills of South Carolina to meet the demand of customers for delivery of lumber at the point of use; that if the South Carolina law is enforced the interstate movement of this commodity by truck will practically cease and South Carolina lumber mills will be forced to ship by rail at increased cost of transportation and serious curtailment of service both in time and convenience to the consuming public." (R. 79).

"14. That with the advent of good roads and motor truck transportation the furniture manufacturers have changed their method of doing business and have commenced shipping large quantities of furniture in interstate commerce by motor truck; that this method of transportation is now important because customers demand quick shipments in small lots and this service cannot be supplied by railroads; that the transportation of this commodity necessitates the use of trucks 96 inches in width and weighing more than 20,000 pounds gross; that enforcement of the South Carolina law under consideration would interfere with the traffic and would result in discrimination against manufacturers shipping furniture out of and across South Carolina in favor of their competitors." (R. 80.)

"15. That the port of Charleston, S. C., handles a large volume of inbound and outbound traffic moving in interstate and foreign commerce; that in recent years the percentage of this interstate and foreign traffic moving to and from the port of Charleston in motor trucks has steadily increased, and at the present time the records of three of the important inter-coastal steamship lines operating in and out of Charleston reflect, respectively, 24 per cent, 58 per cent, and 40 per cent of all tonnage moving by truck; that shippers and consignees

rely upon and demand the service now offered by motor trucks because of advantageous rates and because motor trucks offer transportation facilities which cannot be duplicated by other transportation agencies; that motor trucks now operating in and out of Charleston and carrying cargoes in interstate commerce to and from the port are of the standard type, 96 inches in width and weighing more than 20,000 pounds gross; that many of the commodities moving in interstate commerce by motor truck to and from the port of Charleston cannot be profitably transported in trucks within the weight and size limitations prescribed by the law of South Carolina; that enforcement of the South Carolina law would result in the diversion of large cargoes, normally consigned to the port of Charleston, to other competing ports in other states along the Atlantic seaboard." (R. 80.)

"16. That flour is one of the major commodities moving into the port of Charleston and that a large part of it is transported in interstate commerce by motor truck; that truck transportation of this commodity is necessary because speed of delivery is essential to prevent deterioration and meet the demand of customers and also because numerous small communities are dependent on shipments in smaller quantities than can be profitably shipped by rail; that the average pay load of a motor vehicle hauling flour is 20,000 pounds, making a gross load of about 30,000 pounds, that enforcement of the law under consideration will increase the cost of transportation." (R. 81.)

Rates

The effect of the enforcement of the South Carolina regulations upon common carrier rates is vividly portrayed by two illustrations in the testimony of Emory A. Boudreau, Assistant Chief, Section of Traffic,

Bureau of Motor Carriers, Interstate Commerce Commission (R. 140) (estimated rates based on cost of operation and not competition):

> "Now the shortest distance over paved road from Asheville, North Carolina to Athens, Georgia, is by Greenville, South Carolina, for a distance of approximately 163 miles. A common carrier restricted to 40,000 pounds gross weight could handle canned goods, we will say, from and to these points at the rate of 19.07 per hundred pounds. If he was restricted to a 20,000 pound gross weight, because of its travel through the northwest corner of the State of South Carolina, he would require a rate of 38.08 per one hundred pounds."
>
> "The distance from Richmond, Virginia, to Wadesboro, North Carolina, is approximately 290 miles. Between Richmond, Virginia, and Cheraw, South Carolina, the distance is approximately 292 miles. Now while the carrier operating between Richmond, Virginia, and Wadesboro and restricted to 40,000 pounds gross weight would require a rate of 35 cents per one hundred pounds, on the same commodity between Richmond and Cheraw, because of the 20,000 pounds gross weight restriction, he would require a rate of 67.07 or a difference of 32.02 per one hundred pounds for approximately two miles further to a South Carolina point."

The 90 Inch Width Limitation

That provision of the South Carolina regulations which will inflict the heaviest and most disastrous penalty on interstate commerce, and in effect will amount to a discrimination against interstate commerce, is Section 6 which provides a 90 inch width limitation on all motor vehicles. (Finding of Fact No. 24, R. 83).

This follows from the fact that all of the States of the Union except South Carolina allow a width of 96 inches

(See Table of States, Subsection B, Section II of this Brief).

The evidence plainly shows, and the District Court found (Finding of Fact No. 20; Opinion, R. 67) that from 85 per cent to 90 per cent of all vehicles now being built and used in interstate commerce have a standard width of 96 inches (R. 155).

The enforcement of this limitation will require private and for-hire carriers no matter in or to what State their shipment originates or is destined, to provide specially built trucks if their shipments are to be routed into, from, or through the State of South Carolina.

Its enforcement will amount to severe discrimination against shippers and operators in South Carolina's neighboring States, as well as those in other States, seeking to compete with intrastate operators in South Carolina, for they will be forced to provide themselves with an entirely different set of vehicular equipment from that which they now possess in order to get into the State of South Carolina at all.

Regardless of the justification for this result (which is shown not to exist in Subsection B of Section II of this Brief) certainly it will be true of interstate commerce in the South Atlantic region, what this Court said in *Hall* v. *DeCuir,* 95 U. S. 485:

> "Commerce cannot flourish in the midst of such embarrassment."

Attempt of South Carolina Legislature to Prevent the Threatened Burden

In May 1937 the General Assembly of South Carolina sought to prevent the threatened disaster to interstate commerce and the welfare of the State of South Carolina by enacting an "Act to Regulate and Limit the Use of Highways" (See Appendix I of this Brief)

which would permit axle weights of 16,000 pounds on high pressure and 18,000 on low pressure pneumatic tires, 30,000 pounds gross weight for single units, and 45,000 pounds gross weight for combinations. These limitations were to be applicable on all the highways of the State and not alone upon the main interstate highways as to which the enforcement of the 20,000 gross weight limitation on all vehicles was enjoined by the District Court. Unfortunately, however, this attempt, which would have rendered this appeal moot, was vetoed by the Governor of South Carolina on May 18, 1937 and this veto was sustained by the House. Citizens of that State, and other States, vitally affected by the threatened enforcement of the regulations in issue, have no recourse other than to claim in this Court the constitutional protection afforded by the Commerce Clause of the Constitution.

II.

BURDEN UPON INTERSTATE COMMERCE WILL BE ARBITRARILY AND NEEDLESSLY IMPOSED

In Section I we have shown that the enforcement of the South Carolina regulations will impose a substantial and drastic burden on interstate commerce amounting to a regulation in fact. In Section III we demonstrate by established constitutional principle that if such burden is arbitrarily and needlessly imposed, the regulations are regulations of interstate commerce in the constitutional sense and are void. In Section II it will be shown that these regulations, as applied to the main interstate highway system, are arbitrarily and needlessly imposed, transcending the reasonable necessity for their exercise, (A) irrespective of the physical capacity or character of the highways, and (B) a fortiori, because of the capacity of the highways and their functional character.

A. Irrespective of the Physical Capacity or Functional Character of the Highways, the Weight Regulations Arbitrarily and Needlessly Exceed the Reasonable Necessity for their Exercise.

Irrespective of the physical capacity or functional character of the highways, the South Carolina weight regulations are restrictive to an arbitrary and needless degree. Whether or not (in the light of the pronouncements of this Court in *Sproles* v. *Binford,* 286 U. S. 374) the extent to which they thus exceed the reasonable necessity for their exercise would be sufficient to

invalidate them because of the burden which they will inflict upon interstate commerce, it is unnecessary in this case to decide. Their unreasonableness in this regard, coupled with the extent to which they exceed their reasonable necessity when the physical capacity and functional character of the main interstate highway system are considered, takes them out of the scope of this Court's decision in *Sproles* v. *Binford, supra,* and leaves no doubt as to their invalidity.

Since there is no dispute that gross weight in some respects is important in connection with the use of bridges (Finding of Fact No. 25) and that the width of vehicles must be reasonably adjusted to the width of highways, discussion of these two subjects is considered under subsection B of this Section where the reasonableness of the regulations is considered in relation to the physical capacity and functional character of the class of highways affected by the District Court's decree.

Section 4 of the South Carolina Act, prescribing a gross load of 20,000 pounds, is arbitrary and unreasonable, since the gross weight of a vehicle is not a factor in the design of highways, and, as such, has no relationship to the conservation of the highways, the axle or wheel load of the vehicle being the critical factor.

The District Court found as a fact (Finding of Fact No. 22) that:

> "Gross weight of vehicles is not a factor to be considered in the preservation of concrete highways, but wheel or axle weight; that vehicles en-

> gaged in interstate commerce are so designed and the pressure of their weight is so distributed by their wheels and axles that heavy gross loads can be carried over concrete roads without damage to the concrete surface; and that a gross weight limitation of 20,000 pounds is unreasonable as a means of preserving the highway."

This finding was based upon a fundamental truth not questioned at the trial, nor is it seriously attacked in appellees' briefs so far as it applies to the conservation of the highways. Their defense of the regulation in this respect is based upon their claim that it has some relation to the *"maneuverability"* of the front axle (S. C. Br. 67) and to the facility of compliance with and enforcement of the law (S. C. Br. 71) which contentions we hereafter discuss.

While this principle may at one time have been considered "scientific" in the sense that common experience had but *newly* been rationalized and theoretically expressed, it is now a fundamental and universally accepted principle of highway design and regulation.

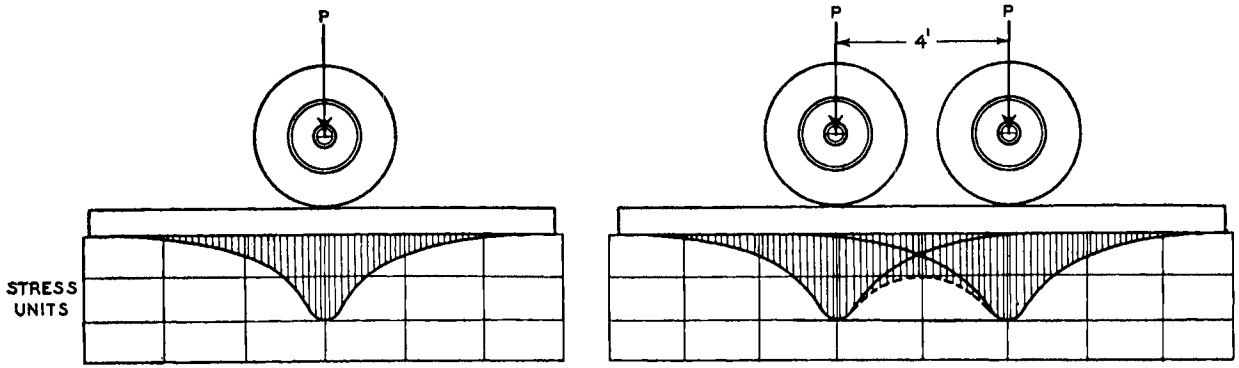
The principle is unequivocally pronounced by the American Association of State Highway Officials, a body of men especially qualified to speak authoritatively: "Highway stresses are ruled by *wheel* loads and not by *gross loads"* and "so far as road surfaces are concerned, the limitation of axle or wheel load gives *full protection,* let gross loads be what they may." (R. 70)

The principle is based upon approved tests which have found that the stress in a concrete pavement caused by the wheel load of a motor vehicle is highly localized and that the critical stress under one wheel is not increased by the presence of the other wheels of the vehicle (provided the axles are more than 40 inches apart (R. 126)), as is illustrated in Figure 1. This is true also for pavements of the macadam type because through inherent lack of slab strength these pavements are unable to distribute the load even as widely as do concrete pavements.

It is true as appellees observe (S. C. Br. 65) that the 20,000 pound gross weight limitation, when translated into axle-loads means that for two-axle trucks there is an automatic limitation imposed on the heavier rear axle varying with the percentage of the load carried on the rear axle. As illustrated in Figure 2, this gross load limitation results in wheel loads of from 8500 to 9000 pounds (17,000 to 18,000 pounds per axle) on conventional four wheel trucks (varying with distribution of load. R. 135; S. C. Br. 67).

This observation but emphasizes the unreasonableness of a law which denies to the operator the benefit of the additional payload which he could carry under these permitted wheel or axle weights by merely shifting the distribution of his load or employing vehicles designed for better load distribution, as illustrated by the first pictured vehicle in Figure 3. Thus this regulation will only serve to discourage the use in interstate commerce of vehicles of proper design, to the only end that the operator's pay load will be disastrously curtailed and the conservation of the highways in no measure advanced. On the other hand, the safety of the highways, which the regulation purports to promote, will be endangered. (Finding of Fact No. 23.)

THE STRESS IN A CONCRETE PAVEMENT CAUSED BY THE WHEEL LOAD OF A MOTOR VEHICLE IS HIGHLY LOCALIZED. THE CRITICAL STRESS UNDER ONE WHEEL IS NOT INCREASED BY THE PRESENCE OF THE OTHER WHEELS OF THE VEHICLE.

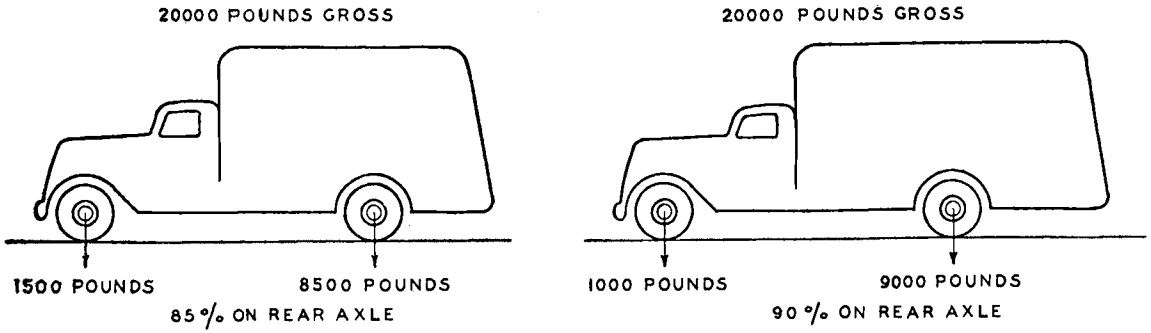


THE WHEEL LOAD AND NOT THE GROSS LOAD IS THE IMPORTANT LOAD SO FAR AS THE CONCRETE PAVEMENT IS CONCERNED. THIS IS TRUE ALSO FOR PAVEMENTS OF THE MACADAM TYPE BECAUSE, WITH THEIR INHERENT LACK OF SLAB STRENGTH THESE PAVEMENTS ARE UNABLE TO DISTRIBUTE THE LOAD EVEN AS WIDELY AS DO CONCRETE PAVEMENTS.

FIGURE 1

IT IS A KNOWN FACT THAT AN APPRECIABLE PERCENTAGE OF TWO AXLE TRUCKS HAVE 85 TO 90 PER CENT OF THEIR TOTAL WEIGHT CARRIED BY THE REAR AXLE.

WITH AN 20000 POUND GROSS LOAD LIMITATION IT IS POSSIBLE TO HAVE CONVENTIONAL 4 WHEEL TRUCKS IMPOSING THE FOLLOWING WHEEL LOADS ON THE ROAD SURFACE.



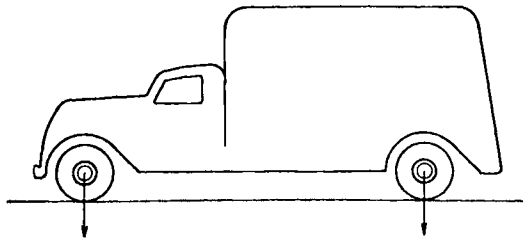
THUS WHEEL LOADS OF THE ORDER OF 8000 POUNDS CAN BE EXPECTED ON THE HIGHWAYS UNDER A SIMPLE 20000 POUND GROSS LOAD LIMITATION.

FIGURE 2

VEHICLES DESIGNED FOR BETTER LOAD DISTRIBUTION CAN. WITH NO GREATER MAXIMUM WHEEL LOADS, CARRY MUCH GREATER PAY LOADS AND STILL DO NO MORE DAMAGE TO THE PAVEMENTS THAN OCCURS UNDER AN 20000 POUND GROSS LOAD LIMITATION.

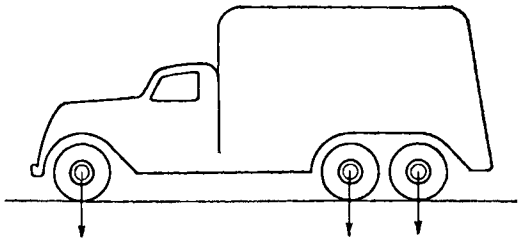
FOR EXAMPLE –

24 000 POUNDS GROSS



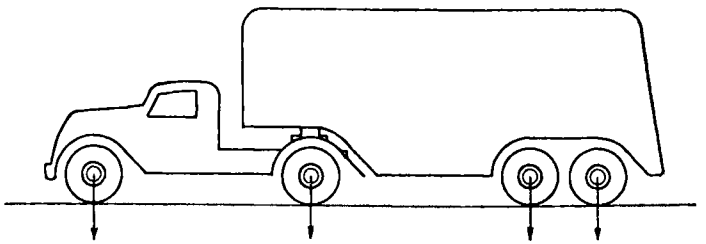
4 WHEEL TRUCK

40 000 POUNDS GROSS



6 WHEEL TRUCK

56 000 POUNDS GROSS



TRACTOR SEMI-TRAILER

These considerations apply in even greater degree to the six-wheel trucks, and to the safest and most efficient vehicle of highway transportation, the tractor semi-trailer.

The 20,000 pound gross load limitation is arbitrary and unreasonable in that it denies to trucks equipped with six or more wheels, and to tractor semi-trailers, the utilization of the increased pay-load capacities resulting from the distribution of the total load over their axles, although the practical axle weights permitted under the 20,000 pound gross load limitation be not exceeded, and the stress upon the highway be not increased.

The extent to which the 20,000 pound gross load limitation exceeds the reasonable necessity for its exercise, discussed above as it is applied to 4-wheel trucks, is even greater when it is applied to 6-wheel trucks and tractor semi-trailers, as illustrated in the second and third pictured vehicles in Figure 3. This conclusion is based upon the same physical principles demonstrated above. While the application of the regulation to 6-wheel trucks reduces gross weight, and hence pay-load, to the extent of 100 per cent (although with no lessening of the highway stress), and thus is of serious concern to motor transportation, it is in its application to the tractor semi-trailer combination that the regulation has its most vicious and unjustifiable effect.

Section 2 of the South Carolina Act provides that for the purpose of gross weight the tractor semi-trailer shall be considered as one unit, although by that same section, for the purpose of licensing, the motor unit and the trailer unit are considered independent units. In its opinion (R. 65, 75) the District Court said:

> "Chief among these is the tractor-semi-trailer, in which the power unit is detachable from the load carrying unit, and in connection with the latter imposes no greater strain upon the highway than two trucks of corresponding weight, one following behind the other. Multiplication of axles and wheels distributes the weight of the load, and further protection is obtained from the use of low pressure pneumatic tires. . . . A gross load limit of 20,000 pounds, as we have seen, has no reasonable relation to either safety or preservation of the standard highway, the provision for counting the tractor-semi-trailer combination as one unit for applying the gross load limitation has even less to commend it. . . ."

The burden of the law falls especially heavily upon interstate commerce, because that commerce is dependent upon the modern tractor semi-trailer. As found by the District Court, (Finding of Fact No. 20), "The usual vehicle used by motor transportation companies in interstate commerce is a tractor semi-trailer combination, 96 inches wide and carrying a pay-load of 10 tons or 20,000 pounds." The third pictured vehicle in Figure 3 illustrates that if permitted the axle weights which are permitted four-wheel trucks under the 20,000 pound gross law a tractor-semi-trailer could easily carry the usual interstate pay-load of 20,000 pounds with *less wheel stress upon the highway than that imposed by a four-wheel truck loaded to its gross capacity under the law.*

Yet, as observed by appellees (S. C. Br. 65, 67), while the 20,000 pound gross weight law results in an automatic limitation of from 13,333 pounds to 15,000 pounds for the heavier rear axle of a four-wheel truck, *it results in an automatic limitation of from 8,500 to 9,000 pounds on the second and third axles of a tractor-semi-trailer.*

The law permits highway stresses of 15,000 pounds on an axle of a four-wheel truck, yet confines the axles of a tractor-semi-trailer to 9,000 pounds.

If under the law, a tractor-semi-trailer could weight its axles to the same extent as permitted by the law to a four-wheel truck, it could carry a pay-load *one hundred and sixty per cent greater* than the load it will carry under the 20,000 pound gross limitation, and without increasing the stress on the highway. This is shown by Table II which illustrates the utter dependence of reasonable and practicable pay-loads upon the privilege of distributing the load over the axles of a tractor semi-trailer.

TABLE II.

CAPACITIES OF TRACTOR SEMI-TRAILERS OF VARYING AXLE-LOADS.

(Estimates based upon load distribution of 45% on two rear axles. 12,000 pounds empty weight of combination assumed (R. 114; *Sproles* v. *Binford*, 286 U. S. 374, 389).)

Axle load	Front Axle	Second Axle	Third Axle	Gross Weight	Payload	Per cent increase over payload under law
S. C. law No Regulation	2,000	9,000	9,000	20,000	8,000	
10,000	2,222	10,000	10,000	22,222	10,000	25%
11,000	2,444	11,000	11,000	24,444	12,444	55%
12,000	2,666	12,000	12,000	26,666	14,666	85%
13,000	2,888	13,000	13,000	28,888	16,888	110%
14,000	3,111	14,000	14,000	31,111	19,111	138%
15,000[1]	3,333	15,000	15,000	33,333[2]	21,333	166%
16,000	3,555	16,000	16,000	35,555[2]	23,555	194%
17,000	3,777	17,000	17,000	37,777[2]	25,777	220%
18,000[3]	4,000	18,000	18,000	40,000[2]	28,000	250%

[1] Practical axle weight under 20,000 pounds gross weight regulation (S. C. Br. 65, 67).

[2] With the increase of gross weight beyond 30,000 pounds tractor-semi-trailers of heavier empty weights would be used which would tend to decrease the percentage of increase.

[3] Axle weight with low pressure pneumatic tires recommended by Bureau of Public Roads and American Association of State Highway Officials (R. 70, 275, 280) and adopted by South Carolina Legislature May 12, 1937, but vetoed by the Governor of that State (See Appendix I).

Appellants argue that the imposition of a gross weight restriction is justifiable and reasonable, *notwithstanding it denies to six-wheel trucks and tractor semi-trailers the use of their axles which is allowed the axle of a four-wheel truck, and reduces their pay load capacities over 150 per cent,* because a gross weight law may tend (a) to facilitate steering and "manoeuverability" (S. C. Br. 67) and (b) to facilitate compliance and enforcement (S. C. Br. 71).

Facilitation of Steering and "Manoeuverability."

The argument that a gross weight limitation facilitates steering and manoeuverability of motor vehicles is nowhere referred to in the evidence. No witness either affirmed or disaffirmed it.

We submit that counsel have indulged in theoretical speculation unsupported by the evidence or recognized opinion. This Court said in *Borden's Farm Products Co.* v. *Baldwin,* 293 U. S. 194, 209, that the immunity of the presumption which attaches to legislative action is not "achieved by treating any fanciful conjecture as enough to repel attack." We submit that there is no foundation in the evidence, in facts within the judicial knowledge of the Court, or in common reasoning, for counsels' theory that a motor vehicle with 90 per cent of its gross load on the rear axle is more easily steered or manoeuvered than a vehicle whose load is more equitably balanced. The contrary would seem to be true.

Facility of Compliance and Enforcement.

The contention of Appellants' brief (S. C. Br. 71) that the gross load regulation is reasonable because of the facility of compliance and enforcement is not only based upon inexperienced theorizing by counsel but is

nowhere supported by the evidence. It is in disastrous contrast with the deliberate observations of a body of men who, we can not doubt, are best qualified, by experience and interest alike, to state the truth on the subject. The American Association of State Highway Officials, composed of the enforcement and administrative officials of all the State Highway Departments, answer Appellants' counsel (R. 279):

> "Highway stresses are ruled by wheel loads and not by gross loads. Those who really seek the protection of the highways should help to impress that fact indelibly upon the minds of legislators and law enforcement officers. For, it so happens, that the wheel load is not only the more critical factor but is also the more easily determinable factor. To measure gross loads, stationary platform scales are a practical necessity; and, unless they are placed and actually operated on at least all important roads, the gross load limitation, whatever it may be, will be a virtual deadletter. The wheel load limitation is, on the other hand, easily enforceable by officers, equipped with small, portable scales who, appearing suddenly, first on one road, then on another, may plant their telltale instrument by the roadside and require any driver to run his heaviest wheel on it, and so, quickly and practically, detect the law violators. *And of this at least there can be no question: That for the protection of the roads an enforced wheel load limitation is immeasurably better than an unenforceable gross load limitation.*"

This conclusion was reached, said that body (R. 280) "after many years of consideration on the part of the Highway Transport Committee of the Association, supplemented by painstaking research by a number of State Highway Departments and the Bureau of Public Roads."

That all save five of the States have axle, wheel or tire weight limitations indicates that the recommendations of the Association have been proved by experience.

Like considerations are applicable to the facility of compliance. There is no foundation in the evidence or in experience to support counsels' assumption that operators are unable to comply with axle, wheel or tire weight limitations in the forty three States in which they are effective.

Even if some credence be given counsels' contention that facility of compliance and enforcement would justify a gross weight restriction without regard to axle weights, how does this justify the *same gross weight* for a four wheel truck and for a tractor semi-trailer combination? We have seen above that axles of four wheel trucks will be weighted to 15,000 pounds under the law, but that axles of tractor semi-trailers will be unable to be weighted over 9,000 pounds. If a gross weight limitation is desirable to assure facility of compliance and enforcement, why not fix a gross weight for tractor semi-trailers which would automatically restrict the rear axles to 15,000 pounds? A gross weight of 35,000 pounds would accomplish the purpose. Thus the State of Maryland, while one of the five States with no axle, wheel or tire limitation, fixes a gross weight of 24,000 pounds for a four wheel truck, but 40,000 pounds for a six-wheel truck and tractor-semi-trailers (See Table of States, Section II, Subsection B). The facility of compliance and enforcement claimed by appellants' counsel to flow from a gross load limitation would be preserved, unless perchance, it be contended that the fact that the officer enforcing the law and the operator complying with it would have *only one gross weight figure to remember instead of two* will justify reducing

the pay load capacity of interstate vehicles over 150 per cent. Certainly, if facility of compliance and enforcement can be said to justify a gross load limitation, instead of an axle limitation, the failure of the law to fix a gross weight for tractor semi-trailers higher than that permitted a four-wheel truck is arbitrary and unreasonable.

B. A fortiori because of the physical capacity of the highways and their functional character the regulations arbitrarily and needlessly exceed the reasonable necessity for their exercise.

We have shown in subsection (A) above that irrespective of the physical capacity and functional character of the highways, the weight regulations exceed their reasonable necessity, mainly because of the fact that under them the normal use of the highways will admit axle weighs of 15,000 or more pounds, but this axle capacity will be arbitrarily denied to the safer and more efficient vehicles used in interstate commerce. However, the unreasonableness of these regulations and the extent to which they exceed the reasonable necessity for their exercise is even more strikingly apparent when the physical capacity and functional character of the highways involved are considered.

The contested regulations have never been put into effect. The highways of South Carolina have been safely carrying the intrastate and interstate traffic of the past and present.

It is important to emphasize the fact that the contested regulations have never been put into effect and the highways have been open to the intrastate and interstate traffic of the past and present (R. 209). This is an important consideration: *first,* because the District Court had the benefit of this actual experience and successful behavior of the roads (R. 182) under axle weights of 16,000 and 18,000 pounds and "There is no evidence of deterioration thereof as a result of such traffic except in isolated instances due to unusual conditions" (Finding of Fact No. 21, R. 82) (cf. *Abie State Bank* v. *Bryan,* 282 U. S. 765, 772), and

Second, because it dispels any supposition that interstate commerce has not been unreasonably burdened under the impact of the enforcement of the regulations. Naturally the mere presence of these contested regulations on the statute books has hindered interstate commerce and has tended to discourage investment in modern, efficient transportation units of better weight distribution, and this consideration largely occasioned the original institution of this suit on August 11, 1936; but it was not until November 1, 1936, that the threatened enforcement of the regulations (R. 33) made imperative the grant of an interlocutory injunction by the District Court (R. 37).

In view of the fact that the South Carolina roads are reputedly "as good as any in the country"[1] *and are the best in the Southeastern part of the country,*[2] *we may seriously question the justification for the gross disparity between the South Carolina regulations and those of all the 48 States of the Union (except Alabama,*[3] *Texas,*[3] *Louisiana, Kentucky and Tennessee*[3]*) as shown by the table of States on the opposite page, and their extreme deviation from the considered judgment of those having special knowledge with respect to dealing with size and weight of vehicles using the highways.*

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[1] Testimony of J. S. Williams, Chief Highway Engineer of South Carolina (R. 180).

[2] Idem (R. 184).

[3] As to the enforcement of the restrictive laws of these States, an experienced operator, president of a national association of furniture haulers operating throughout the United States, stated: "The law is not being rigidly enforced in those States . . . . as to paying attention to State laws, it depends on just about like how the railroads operate in various States. That is how rigidly it is enforced."
(R. 147-148)

PRACTICAL WEIGHTS AND WIDTHS OF CONVENTIONAL INTERSTATE MOTOR EQUIPMENT.

Under Axle and Gross Weight Restriction of 48 States.

Note: This table does not purport to give the *exact permissible legal gross weights* for the several types of equipment tabled, which in most cases substantially exceed the figures shown, although in a number of instances the practical and legal limitations coincide. This practicable adjustment of the legal maxima is based upon undisputed data as to the distribution of gross weight over the axles of type of trucks conventionally used in interstate commerce (R. 135; S. C. Br. 67). *The legal width is shown*, since in all save two States the legal and conventional width coincide. In Rhode Island the legal weight exceeds, and under the contested South Carolina regulation it is less than, the conventional width of 96 inches. 1937 amendments to State laws have been considered.

State	Legal Axle Weight in pounds[1]	Practical Gross Weight in Pounds: 4-wheel truck	6-wheel truck[2]	Tractor Semi-trailer[2]	Gross Wts. Other combinations	Legal Width In inches
Alabama	NR	20,000	20,000	20,000	NP	96
Arizona	18,000	22,000	34,000	40-56,000	90,000	96
Arkansas	15,200[3]	24,000	35,000	40-52,000	66,500	96
California	17,000	26,000	34,000	40-50,000	68,000	96
Colorado	18,000	24,000	34,000	40-50,000	63,000	96
Connecticut	NL 20%[4]	26,000	40,000	40,000	NP	96
Delaware	18,000	26,000	36,000	40,000	62,000	96
Dist. of Col.	24,640	30,800	39,600	39,600	118,000	96
Florida	T 500[1]	22,000	22,000	34,000	NP	96
Georgia	17,600	22,000	39,600	39,600	61,600	96
Idaho	18,000	24,000	40,000	40-60,000	68,000	96
Illinois	16,000	24,000	40,000	40,000	72,000	96
Indiana	16,000	24,000	40,000	40-50,000	Formula[6]	96
Iowa	16,000	24,000	35,000	40,000	Formula[6]	96
Kansas	16,000	24-28,000	34,000	48-56,000	68,000	96
Kentucky	NR	18,000	18,000	18,000	NP	96
Louisiana	NR	(Net) 7,000	(Net) 7,000	(Net) 10,000	(Net) 14,000	96
Maine	18,000	24,000	40,000	40,000	40,000	96
Maryland	NR	25,000	40,000	40,000	120,000	96
Massachusetts	T 800[1]	30,000	40,000	40,000	42,000	96
Michigan	18,000[7]	24,000[7]	40,000[7]	45,000[7]	NR	96
Minnesota	18,000	24,000	40,000	40-50,000	NR	96
Mississippi	12,000	22,000	22,000	22,000	30,000	96
Missouri	16,000	24,000	24,000	38,000	48,000	96
Montana	16,800	24,000	34,000	40-50,800	92,000	96
Nebraska	16,000	24,000	32,000	32,000	48,000	96
Nevada	T 600[1]	25,000	38,000	38,000	114,000	96
New Hamp.	15,000	26,000	38,000	38-46,000	69,000	96
New Jersey	Varies[3]	30,000	40,000	60,000	60,000	96
N. Mexico	18,000	24,000	40,000	40-50,000	Formula[6]	96
New York	22,400	36,000	44,000	45-50,000	Formula[6]	96
North Carolina	18,000	20,000	40,000	40,000	40,000	96
North Dakota	16,000	24,000	35,000	35,000	35,000	96
Ohio	18,000	24,000	24,000	42,000	66,000	96
Oklahoma	T 600[1]	24,000	24,000	31,000	55,000	96
Oregon	17,000[9]	24,000	40,000	40-54,000	Formula[6]	96
Pennsylvania	18,000	26,000	36,000	39,000	65,000	96
Rhode Island	22,400	32,000	40,000	40,000	120,000	102
South Carolina	NR	20,000	20,000	20,000	NP	90
South Dakota	16,000	20,000	24,000	30,000	30,000	96
Tennessee	18,000	18,000	18,000	18,000	18,000	96
Texas	T 600[1]	(Net) 7,000	(Net) 7,000	(Net) 7,000	(Net) 7,000	96
Utah	18,000	24,000	40,000	40-50,000	Formula[6]	96
Vermont	15,000	25,000[10]	30,000[10]	35,000[10]	35,000[10]	96
Virginia	16,000	24,000	35,000	35,000	35,000	96
Washington	18,500	24,000	34,000	50,000	68,000	96
W. Va.	16,000	24,000	35,000	45,000	Formula[6]	96
Wisconsin	18,000[10]	24,000[10]	36,000[10]	48-55,000[10]	72,000[16]	96
Wyoming	18,000[10]	24,000[10]	40,000[10]	48,000[10]	48,000[10]	96

NR No regulation.
NP Not permitted.
[1] Low pressure pnuematics—Where no axle or wheel weight is prescribed, but weight per inch of tire width is prescribed, latter is shown.
[2] Varies often with number of axles, or distance between outer axles.
[3] Varies with size and number of tires.
[4] Not less than 20% of gross weight.
[6] Varies with distance between outer axles.
[7] Lowered between March 1 and May 31.
[8] 1400 to 17,200 pounds per wheel according to size and number of tires.
[9] 16,000 pounds on unpaved highways.
[10] Varies with system of highway.

In portraying these contrasts, we are not to be understood as urging that this disparity derogates from the power of the State of South Carolina to establish regulations differing from other States and based upon its own necessities. *Cf. Sproles* v. *Binford,* 286 U. S. 374, at page 390. We do believe, however, that this gross disparity in gross weight permitted, amounting approximately to a *100 per cent difference* in all of the 48 States except five, is corroboratory of the District Court's finding that the 20,000 pound gross weight limitation is not required for the safety or conservation of the primary Federal aid highways in South Carolina. Nor do we believe that this disparity can be minimized or described as *"some diversity"* as Appellants attempt to do (Rd. Br. 70) when they quote the Federal Coordinator with reference to uniformity of weight restrictions: "The need of greater uniformity is generally conceded, but the feeling is also quite general that the varying traffic, topographic, and financial conditions in the different States warrant *some diversity* of weight limitations." This disparity is all the more striking when it is considered that the South Carolina limitation of 20,000 pounds gross will apply even to its standard highways which are a part of the national interstate system, while the laws of 43 of the other States of the Nation permit gross weights around *40,000 pounds* not only on their main interstate highways, but on their *local, feeder, and even unimproved highways.*[1]

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[1]As will be seen from the table, the States of Vermont, Wisconsin and Wyoming classify their highways, reducing the gross weights on secondary and rural highways Oregon, allowing 17,000 pounds axle weights on its *paved highways* reduces the axle weight to only 16,000 pounds on *unpaved highways.*

As to the contrast between the South Carolina regulations and the considered opinion of the expert bodies, the District Court said (Opinion, R. 69-71):

> "And as bearing upon the reasonableness of regulations which would thus burden and hamper interstate commerce by truck, and in effect drive much of it from the roads of the state, we must consider the experience of other states and the judgment of those having special knowledge with respect to dealing with size and weight of vehicles using the highways. In this connection we find that the proposed Uniform Act Regulating Traffic on Highways to which we have heretofore referred, published by the Bureau of Roads of the United States Department of Agriculture in 1934, and drafted by the National Conference on Street and Highway Safety in the Department of Commerce, provides a width of 8 feet for motor vehicles, a wheel load of 8,000 and an axle load of 16,000 pounds with high pressure pneumatic tires and a wheel load of 9,000 and an axle load of 18,000 pounds with low pressure tires. The following organizations cooperated in the conference in which this proposed uniform act was drafted, viz.: Bureau of Public Roads, U. S. Department of Agriculture; American Association of Motor Vehicle Administrators; American Automobile Association; American Mutual Alliance; American Railway Association; American Transit Association; Chamber of Commerce of the United States; National Automobile Chamber of Commerce; National Bureau of Casualty and Surety Underwriters; and National Safety Council. Practically the same recommendations with respect to size and weight and identically the same as to the matters here under consideration, were made by the American Association of State Highway Officials in convention at Washington Nov. 17, 1932; and these have been approved by the following groups:

American Automobile Association; American Farm Bureau Federation; American Motorists Association; American Petroleum Institute; Automobile Manufacturers Association; Detroit Board of Commerce; National Association of Motor Bus Operators; National Grange; National Highway Users Conference; National Industrial Traffic League; National Transportation Committee; and Rubber Manufacturers Association.

The American Association of State Highway Officials in its publication 'Who shall use the highways and how', in addition to making the foregoing recommendation as to size and axle weights, says: 'Highway stresses are ruled by *wheel loads* and not by *gross loads'*, and 'so far as road surfaces are concerned, the limitation of axle or wheel loads gives full protection, let gross loads be what they may'. For protection of bridges it recommends that gross weight be fixed by the formula W= (L plus 40), where W represents total gross weight, L the distance in feet between the first and last axles of a vehicle or combination of vehicles, and C a coefficient to be determined by the individual states. For this coefficient a minimum of 700 is recommended. Under this recommendation the minimum gross weight limit could hardly be less than 35,000 pounds."

The force of these recommendations is not detracted from by appellants' citation (S. C. Br. 57) of Section 146 of the Uniform Traffic Code referred to by the District Court. Section 146 reads as follows:

"In view of the varying conditions of traffic, and lack of uniformity in highway construction in the several States, no uniform gross weight limitations are here recommended for general adoption throughout the country. For the protection of bridges, the American Association of State Highway Officials recommends the following formula:

> W equals 700 (L plus 40) where W equals the gross weight in pounds and L equals the length in feet between the centers of the first and last axles of a vehicle or combination of vehicles."

But the recommendation of this Section cannot be so interpreted as to render meaningless the axle and wheel weights recommended, as a 20,000 pound gross weight law will do. That 43 of the 48 States have in their gross weight restrictions given practical use and purpose to the recommended axle and wheel weights is proof that the Section has not been construed as appellants would construe it, and this is especially so when it is remembered that gross weights practically double the South Carolina limitations are allowed by the other States not only to their primary systems but to their rural and unimproved roads as well.

The District Court was amply justified in its finding that the main interstate highways of South Carolina were designed to carry and are capable of accommodating, the present interstate traffic, in particular axle weights of 16,000 and 18,000 pounds, and certainly gross weights substantially in excess of 20,000 pounds, without causing abnormal deterioration or impairing the safety of the highways.

The Court had the benefit of the experience of other States, and the considered opinion of expert bodies, including the Bureau of Public Roads, the American Association of State Highway Officials (Opinion, R. 69-71); the testimony of the Chief Highway Engineer of South Carolina that the South Carolina highways

are reputedly "as good as any in the country" (R. 180) and are the best in the Southeastern part of the Country (R. 184).

More significantly it had the benefit of the experience of the past seven years during which the roads of the State had been subjected *without restriction* (R. 209) to interstate and intrastate vehicles of gross weights up to and over 40,000 pounds and axle weights of 16,000 and 18,000 pounds, and this experience proved that, regardless of differences in theoretical estimation, the highways were safely accommodating the traffic.

The District Court had the expert opinion (R. 124-310) of Harry Tucker, professor of Highway Engineering in North Carolina State College, and Director of the Engineering Experimental Station at Raleigh, that pavements of the design used in South Carolina were capable of sustaining axle weights of 16,000 and 18,000 pounds. While he made no detailed study of the highways, he observed several of the main highways over which the interstate and intrastate traffic has been moving *without restriction* for the past seven years, and found no evidence of deterioration or failures caused by such traffic. It was his expert opinion (R. 125) that "if heavy trucks were going to damage the highways and those trucks used those highways for six years," the damage would begin to show up. He observed (R. 130) that the subgrade conditions in South Carolina were excellent, and that there was not as much frost action in South Carolina as in North Carolina (R. 130).

The most competent expert opinion available to the District Court was that of the witness L. W. Teller, (R. 130-136) who had been seventeen years an engineer

with the United States Bureau of Roads, and ten years in charge of research in pavement design. At the trial he was informed of the cross-section design of South Carolina concrete pavements, which information was in accordance with his understanding of those designs (R. 132). He said: "There is not a great range in thicknesses, as used in the states throughout the country. In general, I would say that by far the greatest majority of states have interior slab thicknesses from six to seven inches", and the South Carolina design "is quite a typical design." The witness' considered opinion as to the capacity of the South Carolina paved road type, as described to him, was as follows:

> "There are many factors that effect that relation of the wheel load to the structural behavior of the pavement, but in my opinion the application of a wheel load of the order of 8,000 pounds, through proper pneumatic tire equipment for that wheel load, would not stress the pavement within a half of its breaking strength."

Appellants' counsel go outside of the record to select excerpts from scientific reports and studies made by Mr. Teller and other engineers associated with the Bureau of Public Roads (S. C. Br. 53, 72-78) in their effort to qualify and explain away the witness' deliberate conclusion. Of course, this Court will properly estimate the value of such excerpts, zealously selected, and apart from their context. We think however that these quotations in the appellants' brief but illustrate the value of Mr. Teller's opinion based as it is upon years of research and actual tests by the Bureau of Public Roads under his supervision. That, in reaching his conclusion, the witness took into account all the

varying factors which affect the structural behavior of a pavement is apparent from the above quotation from his testimony. And in this connection the witness stated (R. 134) "My testimony so far as concrete pavements is concerned is opinion based on a very considerable amount of testing data; that is, data derived from tests conducted on such type of pavement as we are talking about. My testimony as to what these concrete roads can bear is my opinion based on test data, and I don't believe any other reputable engineer would come to another conclusion from those tests today."

Mr. Teller confined his testimony to concrete roads. Of the 1,134 miles in the seven roads specifically named in the District Court's decree, 68.5 per cent were of this type and quite a considerable more mileage is concrete base with bituminous top (S. C. 92). He pointed out that the concrete pavement is the only pavement that admits "rational design" (R. 134) and that the design of the other types must be based on the observation of pavements of that type under the traffic they are bearing. The evidence disclosed that these other types have been subjected to interstate and intrastate traffic, *without restriction,* for the past seven years, and have not been unduly affected.

Excerpts in appellants' briefs from "Public Roads" regarding effect of "subsoil" conditions on pavement behavior

Appellants' counsel quote extensively from "Public Roads", the publication of the Bureau of Public Roads (S. C. Br. 73-78) to show the relationship between subsoil conditions and pavement behavior. That there is a relationship cannot be doubted, but this is true re-

gardless of the capacity of the highway. These quoted excerpts, unexplained by their authors in the light of the particualr highways and problems here involved, and lifted bodily from their context, can be of little value.

The evidence discloses that the sub-grade conditions in South Carolina were "most excellent" (R. 130), and it is to be assumed that Mr. Teller, who supervised the tests upon which the quoted excerpts were based, had these factors in mind among others when he concluded, as quoted above, that the South Carolina would adequately accommodate wheel loads of 8,000 pounds.

Testimony of J. S. Williamson, Chief Highway Engineer

The Chief Highway Engineer made no attempt to estimate an axle load which he thought should be applicable over all the highways, but it is noteworthy that whenever he spoke of the capacity of the highways he estimated the capacity in terms of *axle loads* not gross loads. His estimates varied from a 12,000 to 13,000 pound axle weight recommendation for the main highways generally (R. 188) to 18,000 pounds per axle for the recently built roads (R. 179) and the "better roads" (R. 189). However, in weighing the significance of the witness' 12-13,000 general recommendation for the primary State highway system, it is highly important to observe that it was a compromise estimate based upon a downward adjustment from the standard 16-18,000 pound axle weight to compensate for weak stretches in some of the highways (R. 182). As the witness put it: "A road is no stronger than its weakest section (R. 182). The evidence disclosed, however,

that on the main interstate highways across the State, and those affected by the decree, there were only a very few weak stretches, and as the District Court said (Opinion, R. 67): "when it has been designed for the accommodation of traffic of the character carried on by the interstate motor carriers, it is unreasonable to withhold the entire system from the use of such traffic because of a few weak links, which if injured by the traffic, can be repaired at comparatively slight expense." This conception of the relation between an improved trunk highway, designed to carry standard traffic of interstate commerce, and a few weak links along its route, is the only conception consistent with the functional character of such a highway, and is recognized as reasonable and proper by all progressive highway officials. Thus, the Chief Highway Engineer of South Carolina (R. 188):

> "Q. So, if there is a failure on the highway, you strengthen that to meet the demands of travel?
>
> A. Yes.
>
> Q. And that is just like any other industry—for instance, if there is a failure of machinery they strengthen or replace it.
>
> A. Yes."

However, no matter to what extent the witness intended his 18,000 pound estimate to apply, his general estimate of an axle load of 12-13,000 pounds is sufficient in itself to indicate that the contested regulations exceed the reasonable necessity for their exercise, since the law will arbitrarily limit the axles of a tractor semi-trailer, the standard vehicle of interstate commerce, to 8,000 and 9,000 pounds (See, page 71). As shown by Table II, page 72, if the tractor semi-trailer

were permitted axle weights of 13,000 pounds, according to the Chief Highway Engineer's general estimate, it could carry *a payload 110 per cent greater* than it will be able to carry under the law, and there is even less justification for this drastic burden when it is considered that under the law, axle weights (on four-wheel trucks) of 17,000 and 18,000 pounds will be stressing the highways as a matter of course (See page 66.)

The Statements of C. H. Moorefield
(R. 255, 261, 265)

The statements of C. H. Moorefield, former Chief Engineer of South Carolina (R. 255, 261, 265), before a committee of the Legislature, which are relied upon in part by appellants to attack the finding of the District Court, must be considered in the light of the fact that they were made in 1931, six years ago; that much of the present primary Federal aid system has been constructed and much of the old improved to meet present conditions of traffic since that time; that he did not have the benefit of the experience of the next six years during which, as shown above, modern traffic of axle weights of 16,000 and 18,000 and gross weights up to 40,000 pounds have been adequately accomodated by the highways; that his recommendations were directed to the highway system as a whole and with no particular reference to the functional character of the primary Federal aid system.

The Testimony of Mr. Clifford Older

It must be conceded that if the extraordinary estimates of appellants' witness, Mr. Clifford Older (R.

231-250) be accepted, the finding of the District Court was not correct. But we must respectfully submit that the District Court was justified in giving no weight whatever to the testimony of this witness. This Court traditionally concedes great weight to the judgment of the lower Federal Courts in passing upon the credibility of witnesses. The interest, frankness, bias, and sincerity of a witness as he testifies on the stand are matters of observation which do not appear of record but which must be taken into account by the trial court in passing upon the credibility of the witness. In the case of Mr. Clifford Older, the District Court had the benefit of these observations. It further appears from the record that Mr. Older's testimony at the trial below was merely one chapter in his history of recent years as a witness on behalf of the railroads in their campaign to lower the motor vehicle weight limits of many States. He had appeared before the North Carolina legislature in 1933, on behalf of the railroads, in an unsuccessful attempt to foster upon that State a law similar to that in South Carolina. He had appeared on behalf of the railroads before legislative committees in Missouri, Kansas, Illinois, and Georgia. He had given a deposition for a similar purpose before a legislative committee in Kentucky (R. 245).

The witness' estimates in this case were radically lower than those of the Chief Highway Engineer of the State (R. 250) although the witness had no actual knowledge as to the experience of the roads, and purported to be based on tests conducted by the witness with varying vehicles weights on different types of roads, which he described at some length in his direct examination (R. 232). However, until his cross-examination (R. 245) "it did not occur" to him to explain to the District Court that these tests were conducted in

1922, 14 years theretofore, before later advances in road design, and with trucks *equipped with solid tires.*

Appellees do not here nor did the District Court in its opinion or findings "contend for" specific axle or wheel weights as intimated by appellants (Rd. Br. 85).

While as shown above the District Court was justified in its finding that the primary Federal aid roads of South Carolina were capable of sustaining without injury wheel loads of 8000 to 9000 pounds or axle loads of 16,000 or 18,000, appellants betray a fundamental misconception of the nature of appellees' complaint and of the District Court's actual decision when they intimate (Rd. Br. 85) that appellees and the District Court "contended" for these axle weights. The District Court had no jurisdiction to determine and fix the reasonable axle weights for the highways, nor did it assume that jurisdiction. It was solely concerned with whether or not the South Carolina regulations exceeded their reasonable necessity, and found that they did so. Even if we accept the 13,000 pound estimate of Mr. Williams, the Chief Highway Engineer (R. 187), which as we have shown above was based upon the witness' theory that the capacity of a cross-state road should be radically adjusted to short weak links, the law even yet far exceeds its reasonable necessity in that it arbitrarily denies such axle weight to the standard vehicle of interstate commerce, the tractor semi-trailer. This deduction was drawn from that witness at the trial (R. 188):

> "Q. I show you a drawing here of a particular trailer combination, and as I understand from the

testimony of the engineer, if there is an axle weight of 12,000 pounds on each of the two rear, there would be 6,000 on the front, making a total of 30,000 pounds. Would you think the roads would be sufficiently strong to carry that?

"A. As far as the pavements are concerned, they would get by with 12,000 axle load, just as well as 20,000 gross on two axles with maybe 16,000 pounds. You see that 20,000 pounds gross load, as I understand, you can probably put 80 per cent of that on each axle, which would make a 16,000 pound axle load. As far as the pavements are concerned, that 16,000 pound load would be more stress than the 12,000.

Q. The pavement carries all right the 16,000 pound load?

A. I think some have been going over at more than that."

Thus it appears that while the Chief Highway Engineer recommended an axle weight of 13,000 pounds, short weak links considered, he recognized that under the law the highways would be stressed by axle weights 3,000 pounds in excess thereof.

The evidence of record discloses and the District Court found (Finding of Fact No. 19, R. 82; Oponion, R. 74, 75) that there were only a very few bridges on the main interstate highways in South Carolina which were not designed for and are incapable of carrying or accomodating present traffic and that (Opinion, R. 75) interstate commerce or at least a large part of it could be so routed as to avoid them entirely.

It was not disputed in the trial below that gross weight is a factor in the design and carrying capacity of bridges but that in this respect it is also dependent