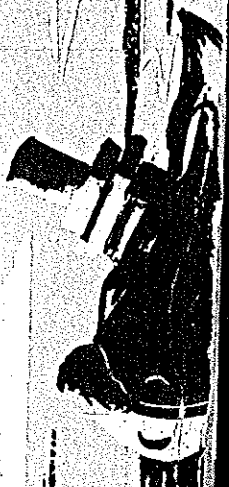
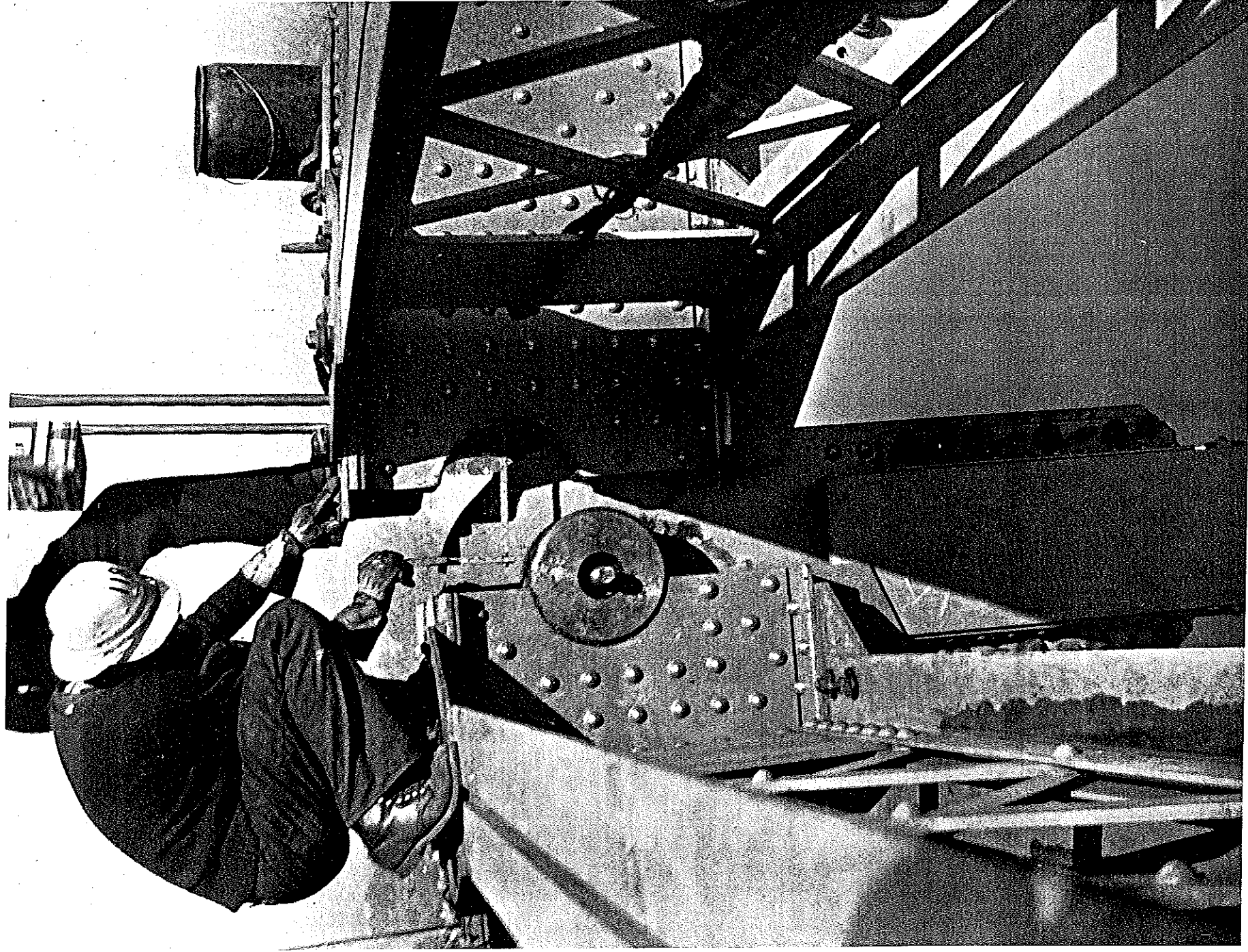




THE MIDTHETOWN-PORTLAND BRIDGE



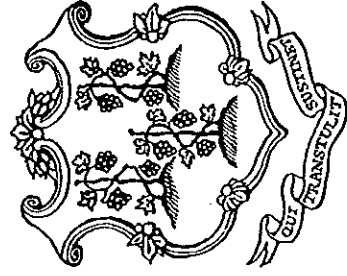
1888



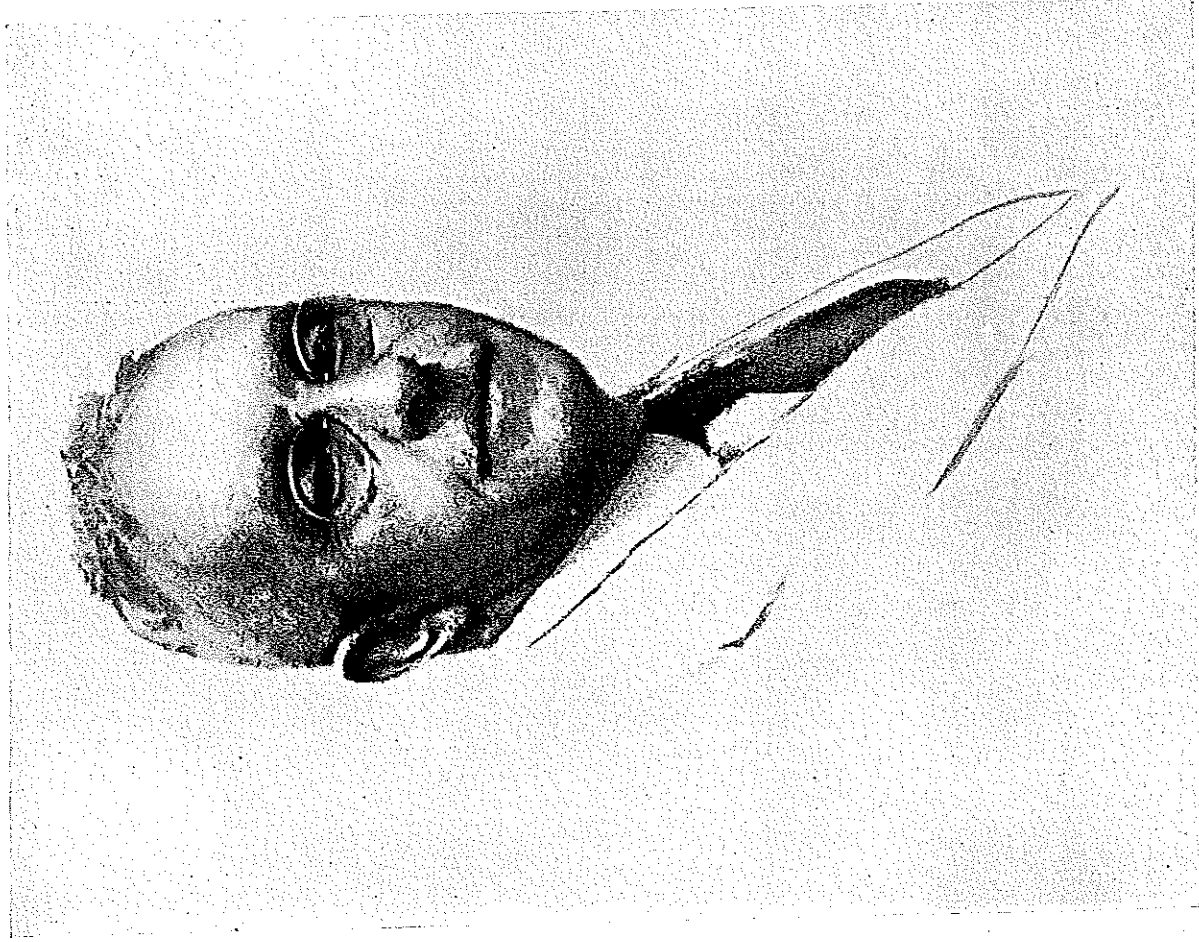
THE FINAL LINK. Another triumph is added to engineering accuracy as the East and West ends of the bridge are united by the last connecting pin. To the people of Middlesex County it is of great and lasting significance, for this last pin is symbolical of the fulfillment of an ideal and the beginning of a new era.

THE MIDDLETOWN PORTLAND BRIDGE

The story of its inception, pictures of its progress, and its significance to the Residents of Middlesex County who, after many years of endeavor have seen a dream come true.



AUGUST 6, 1938



HIS EXCELLENCY WILBUR L. CROSS
Governor of the State of Connecticut
Honorary Chairman Middletown-Portland Bridge Celebration Committee

EXECUTIVE COMMITTEE: Hon. Charles J. Arrigoni, *Chairman*;
Hon. Arthur V. McDowell, *Secretary*; Leonard B. Markham, *Treasurer*;
Hubert C. Hodge, *County Commissioner*; Hon. Joseph P. Bransfield,
County Commissioner; Niles E. Gladding, *Ex County Commissioner*;
Hon. John C. Barry, Hon. Herbert S. Johnson, Hon. Finton Thompson,
Hon. Erastus B. Bigelow, Hon. Vincent J. Walsh, Samuel S.
Mannes, Fred N. Smith, William J. Cox, *Highway Commissioner*;
John A. Macdonald, *Highway Commissioner until April 28, 1938*;
E. C. Welden, *Deputy Highway Commissioner*; L. G. Sumner, *Engineer of Bridges and Structures*; A. W. Bushell, *Engineer of Contracts and Construction*; W. G. Grove, *Associate Highway Engineer*; Project Engineers, L. H. Beebe, H. C. Orr, H. S. Ives.

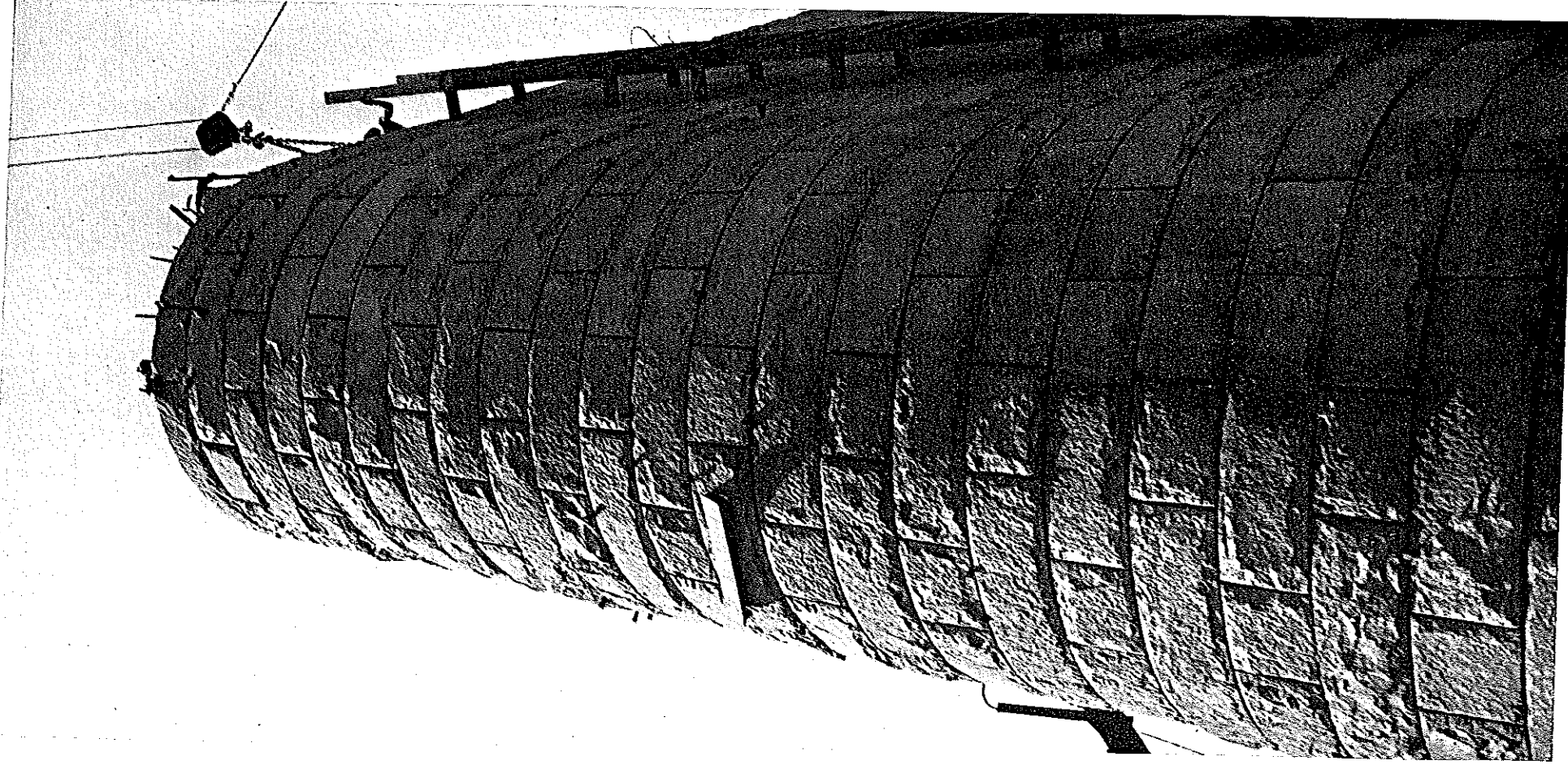
COPYRIGHT 1938 BY THE MIDDLETOWN-PORTLAND BRIDGE COMMITTEE
DESIGNED AND PRINTED AT THE SIGN OF THE STONE BOOK
HARTFORD, CONNECTICUT, BY THE CASE, LOCKWOOD & BRAINARD CO.

FOREWORD

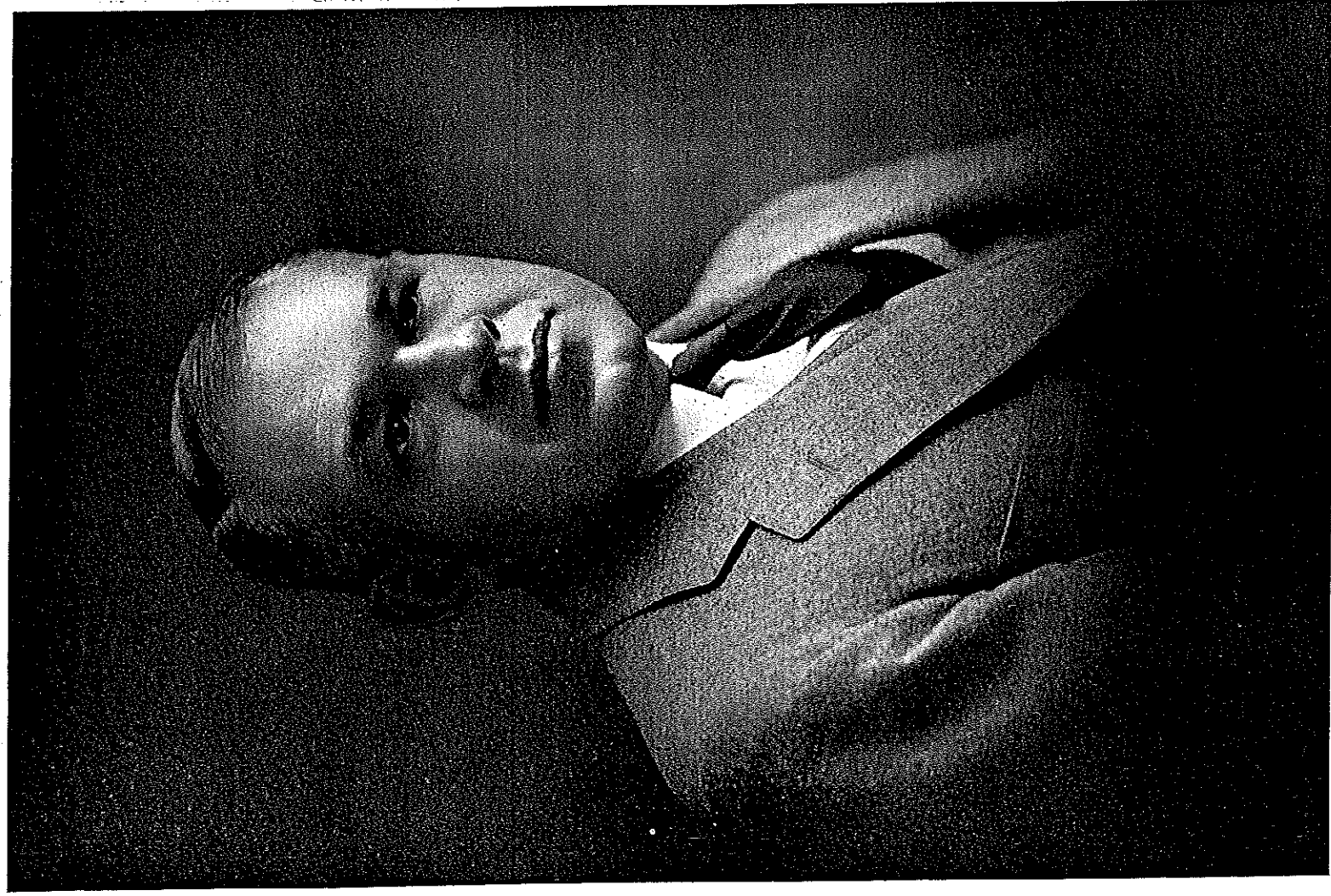
THIS is a day of fruition. For a score of years citizens have dreamed, agitated, and labored to secure the erection of this great bridge. Three years of actual work by many minds and many hands have been required for its construction. Today we are entering into the benefits of all these efforts and we anticipate that we and others shall continue to enjoy them for many years to come.

Fully twenty years ago residents of Middletown and Portland were dreaming of the day when the two towns would be connected by a bridge without a draw span, and were conjecturing how long the old bridge could carry the rapidly increasing burden of motor cars, motor trucks, and motor busses. Drivers from all over the state and from other states were grumbling at the traffic delays in crossing the bridge on Sundays and holidays.

The first definite action came in 1929 when the General Assembly authorized a commission to investigate and report on the necessity, location, type, and cost of a new bridge. This commission, consisting of Chelso L. Arrigoni, chairman, T. Macdonough Russell, Andrew N. Shepard, Elwyn T. Clark, and Charles T. Davis, reported to the Governor, January 15, 1931, showing the necessity for a structure of the present type at the present location and estimating the cost at very nearly the amount actually expended. The depression prevented action at the legislative session of 1931. In 1933 an act was passed giving authority to the Highway Commissioner to prepare plans and put the bridge on the State trunk line system. In 1935 Charles J. Arrigoni, then representing Durham in the House, secured the passage of the necessary act of authorization.



TONS OF GRANITE FACING form this pier, one of three which support the arches. The facing in turn is backed with concrete. The piers, massive structures 100' long and 34' wide, are supported by reinforced concrete going over one hundred feet down to bedrock and encased in steel caissons.

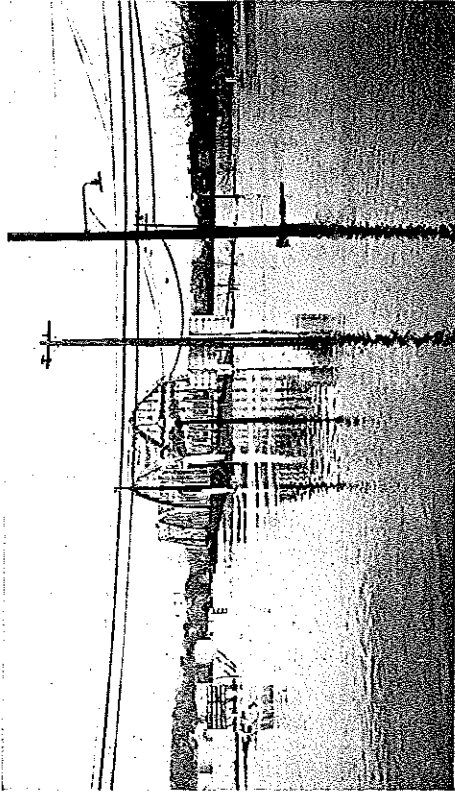


A new committee, composed of Senator Charles J. Arrigoni, chairman, Arthur V. McDowell, Hubert C. Hodge, Joseph P. Bransfield, Niles E. Gladding, John C. Barry, Herbert S. Johnson, Finton Thompson, Erastus B. Bigelow, and Vincent J. Walsh, has efficiently carried out the provisions of the legislative act and supervised the conduct of the work.

Much gratitude is due to the able and generous coöperation of the State Highway Department and the members of its staff; to the Merritt, Chapman and Scott Corporation of New London, the contractors for the substructure; to the Bethlehem Steel Company, the contractors for the superstructure; to the several other contractors; and to all the workers employed for the successful discharge of their respective obligations.

Today we celebrate with hearty appreciation the completion of the labors of all who have been concerned in providing this beautiful and commodious structure. Let us use it gratefully, considerately, and safely.

SENATOR CHARLES J. ARRIGONI, general chairman of the Bridge Celebration Committees and father of the special legislative act authorizing the construction of the new bridge and issuance of \$3,500,000 bonds to meet the expense.



A PICTURE THAT NEEDS NO CAPTION. Taken at noon, March 21, 1936, it shows vividly and dramatically the necessity for adequate bridge facilities between the two neighboring communities.



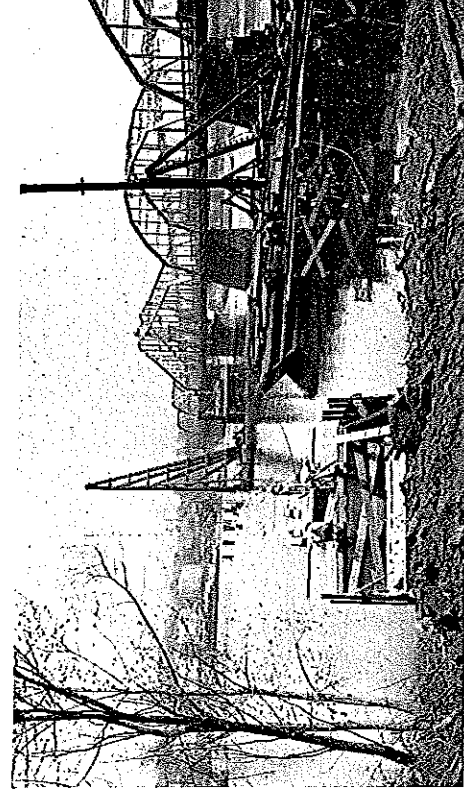
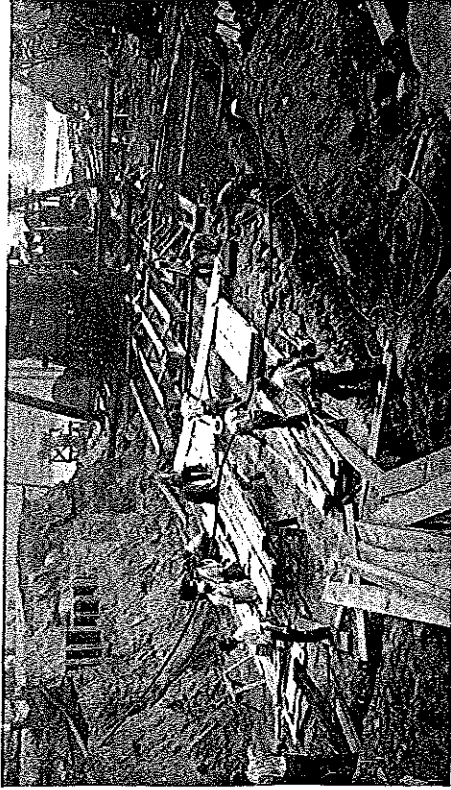
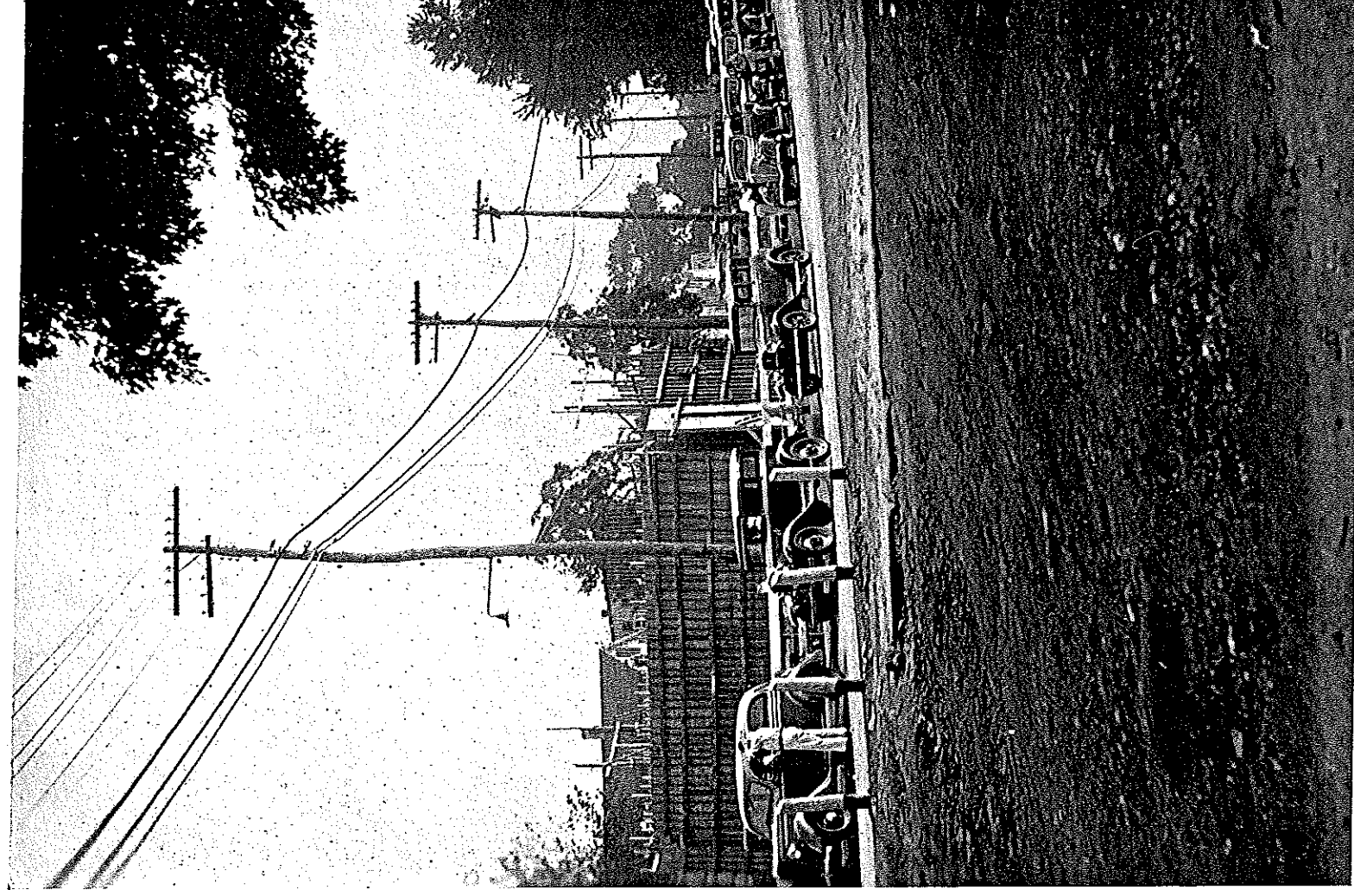
WRECKAGE ON THE CATWALK. In the 1937 freshets all sorts of river debris reached a stopping place at the catwalk. However, when the floods subsided, most of it was carried away by the river.

SOME FACTS ABOUT MIDDLESEX COUNTY AND ITS HISTORY

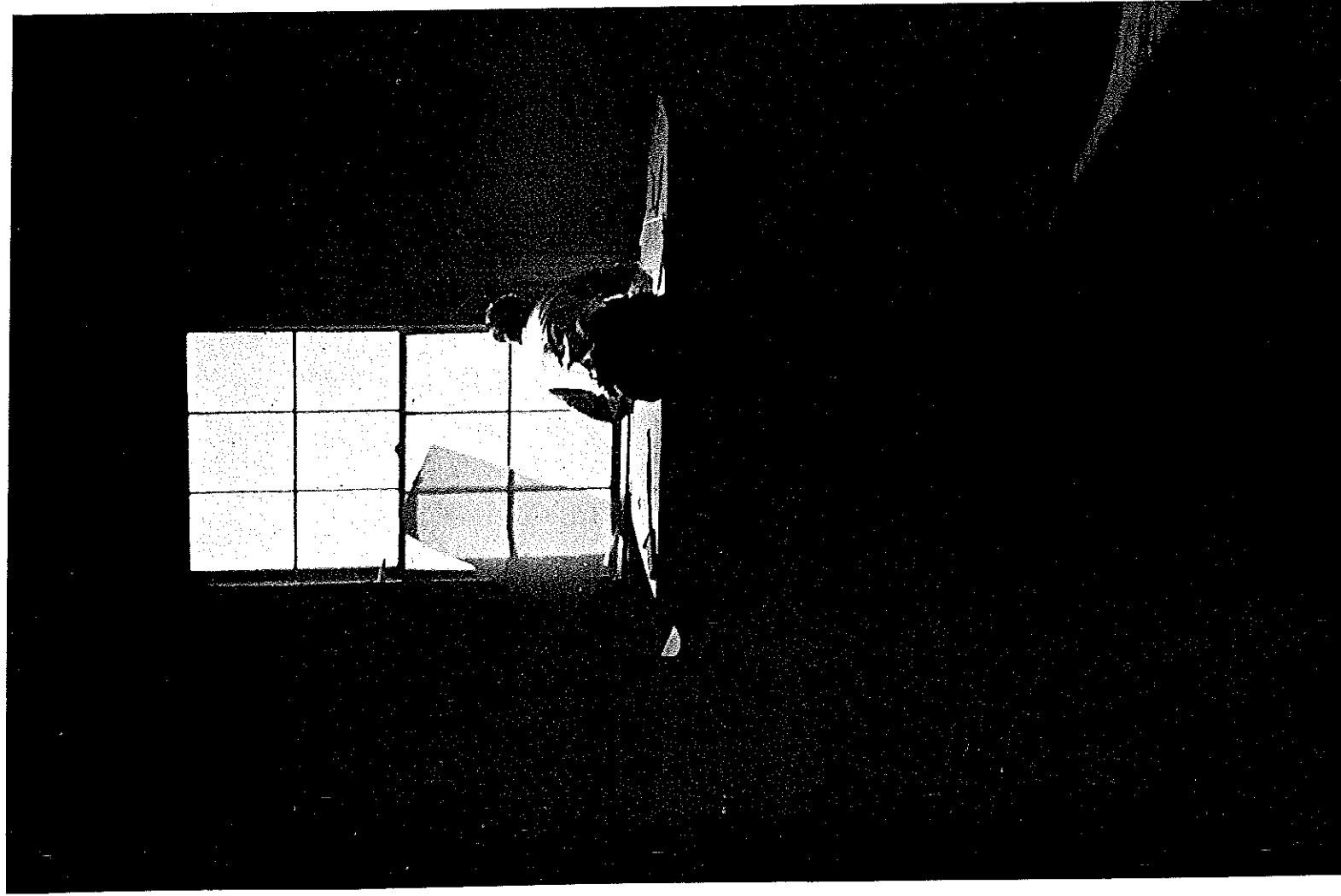
Middlesex County was established in 1785 by taking from Hartford County the towns of Middletown, Chatham, Haddam, and East Haddam and from New London County the towns of Saybrook and Killingworth, to which in 1799 was added Durham from New Haven County. By subdivision the number of towns has become fifteen. From north to south the County has a length of about twenty-five miles and its average breadth from east to west is about fifteen miles, making an area of nearly four hundred square miles. Its population in 1756 was 13,071; in 1790, 20,217; in 1830, 24,845; in 1880, 35,580; and in 1930, 51,388.

TRAFFIC JAMS WERE COMMON. Any driver who has been in a Sunday traffic tie-up can appreciate this bridge. Delays of an hour or more and lines a mile long were not unusual.

CONFUSION AND CHAOS. Excavation, wire, steel, machinery, cables, hose—everything is apparently confusion. Yet all things had their purpose. Out of it all came the foundation of the new bridge.



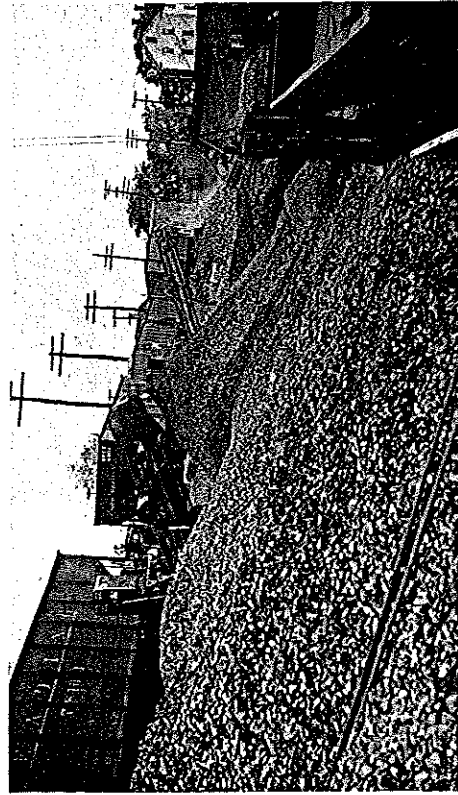
CATWALK TO CENTER PIER. Another problem in bridge construction is the transporting of supplies. A catwalk to the center pier was anchored to steel piling and managed to survive freshets.



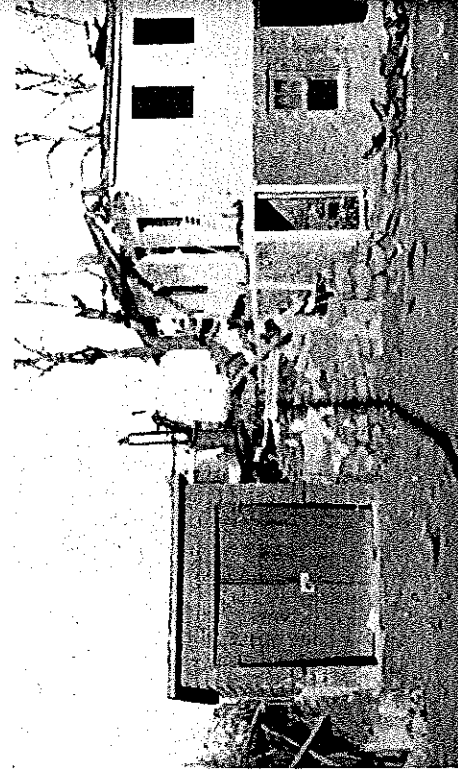
The first settlement within the County was at Saybrook in 1635. Then followed Middletown, 1650; Haddam, 1662; Killingworth (Clinton), 1663; East Haddam, 1670; Chatham, 1690; and Durham, 1698.

Over a century ago, David Dudley Field declared: "The glory of Middlesex and of the State is the Connecticut." Saybrook and the other earliest settlements in the State were located on the banks of the great river in order to secure the opportunities for trade which it afforded. For three centuries the river has been a busy highway of trade; along its banks many ships have been built; and fishing in its waters has been an important occupation. In 1815 there were owned in the County 82 sailing vessels and 51 were launched that year at yards in the County. Steam navigation on the river began about 1819 and by 1824 regular service was in operation.

PLANS ARE MADE. After years of struggle, promoting the project and securing the necessary legislation, engineers' specifications and contractors' bids were prepared. The job was on!



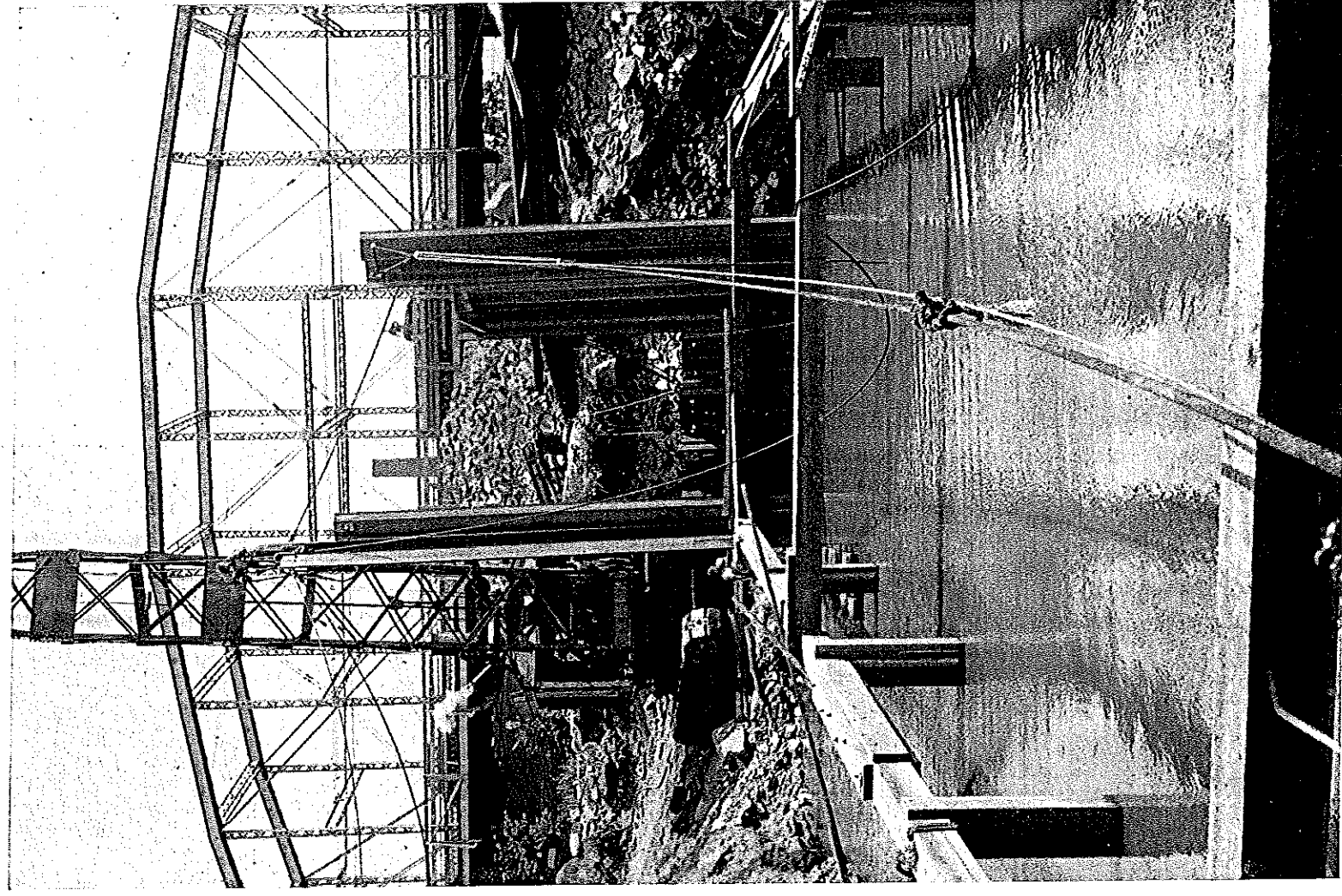
24,500 YARDS OF CONCRETE used in the bridge required a lot of stone. Carloads were brought in and transported by conveyors to the concrete mixers from which it was rushed to hungry forms.



HOMES WERE DEMOLISHED. Entire sections of the towns of Middletown and Portland had to be relocated. Civic pride and co-operation for greater common good were shown in heroic quantities.

The river, however, has been a barrier in the case of east and west routes so that its crossing has always been a problem. At first ferriage was conducted by individuals, with or without public license and regulation, and effected by means of canoes, rowboats, and scows. A publicly licensed ferry seems to have been operated at Windsor as early as 1642; the first within Middlesex County was authorized from Saybrook to Lyme in 1662; the next was Chapman's between Haddam and East Haddam in 1664; Brockway's at Essex came in 1724; and the one at Middletown not till 1726. In 1819 there were ten such ferries operating within Middlesex County, of which the Middletown and Higganum ones were owned by the towns and the others were private affairs.

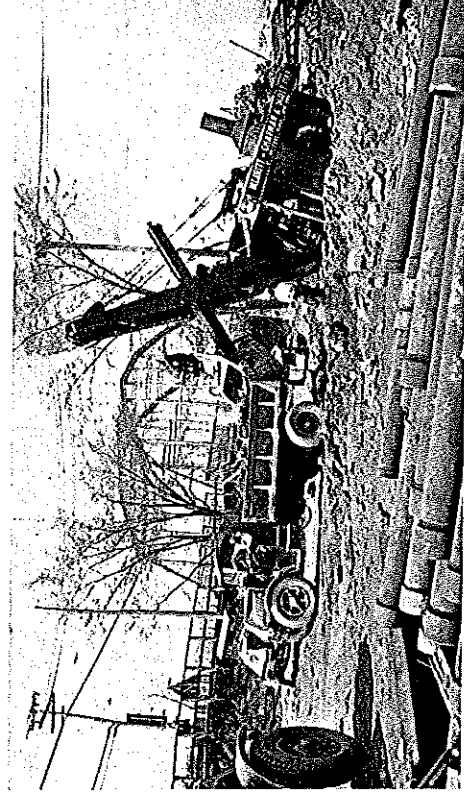
The first bridge across the Connecticut was built at Bellows Falls in 1785, but no bridge spanned the



BEGINNING OF A COFFER-DAM. In order to prepare the base for the massive granite and concrete piers, a watertight enclosure of steel sheet piling had to be built and pumped dry.



SURVEYING FOR THE EXCAVATIONS. Because of the character of the soil, it was not necessary to dig to bedrock on all the piers. A few of the viaduct piers are on gravel hardpan, some on bedrock.

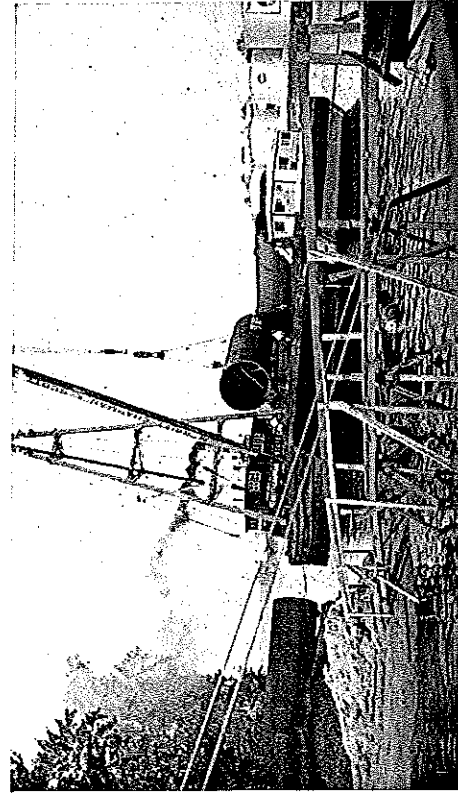


EXCAVATION FOR PORTLAND VIADUCT. Truck, steam shovels, men and labor were required to grade and fill for the approaches on both sides, 27,000 cubic yards had to be excavated.

river within this State till 1808 when one was opened at Enfield. David Dudley Field, writing in 1819, observed: "The width, the force, and especially the navigation of the Connecticut, are such as to render it very improbable that bridges will ever be thrown over it, within the bounds of this country." This prophecy is now disproved for the eighth time, and for the first time by a bridge without a draw span. It was first disproved by the railroad bridge at Saybrook in 1870, and secondly by the railroad bridge at Middletown in 1872—both now replaced by new structures. The first highway bridge was opened between Middletown and Portland in 1896, while the Saybrook bridge was completed in 1911 and the East Haddam one in 1913.

Until the nineteenth century the roads of Middlesex County were deplorable makeshifts so that land travel was mostly on horseback. The

HARDENING THE CAISSON'S TEETH. To cut through solid rock, the teeth of the caisson must be extra hard and sharp. Stellite, a tungsten alloy, is being applied to increase strength.



CAISSONS CAME BY RAIL AND WATER. Made of steel $\frac{1}{2}$ " thick, the caissons, weighing from 12 to 37 tons were shipped by barge and rail. Derricks were used to hoist them into their places.

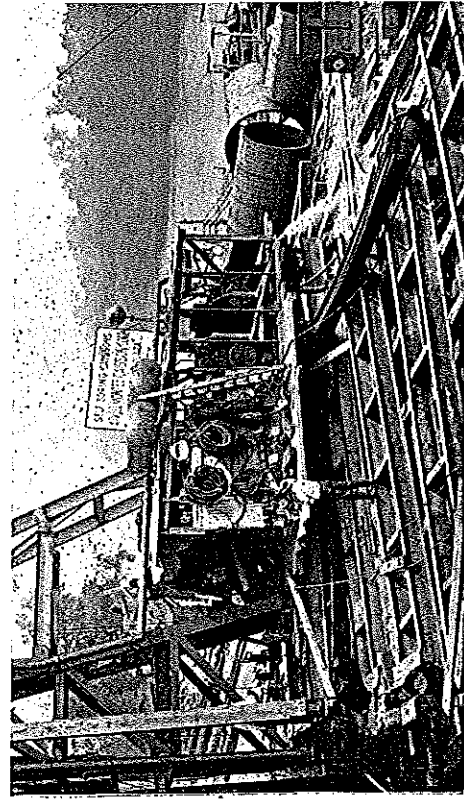


SAND-HOGS REACH BED-ROCK. Under air pressure of 45-47 lbs., they were allowed to work only $\frac{3}{4}$ of an hour, spend $\frac{1}{4}$ of an hour decompressing, and rest five hours before working again.

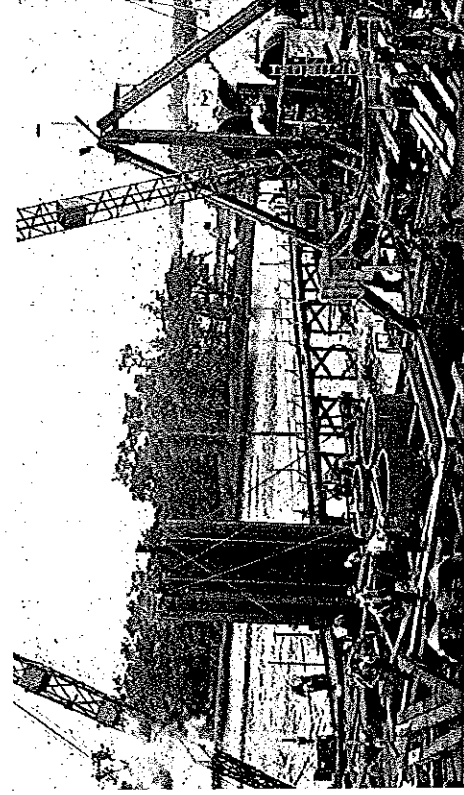
first pleasure carriage in the County is said to have been used in Killingworth (Clinton) in 1748; the first in Middletown was about two years later. Stages to carry the mail began to run on the post road along the Sound in 1794 and on the post road from New Haven through Middletown to Hartford, even earlier, in 1785. The Middlesex Turnpike from Wethersfield through Middletown to Saybrook was incorporated in 1802 and followed by the chartering of fourteen other turnpikes in the County by 1818. Most of these routes are now essentially the lines of the principal state highways in the County. Thanks to the State Highway Department and to state grants to the towns Middlesex County is now well threaded with excellent hard-surfaced roads.

The first railroad in Middlesex County was the Branch from Berlin to Middletown built in 1850. Passenger service on this line has now

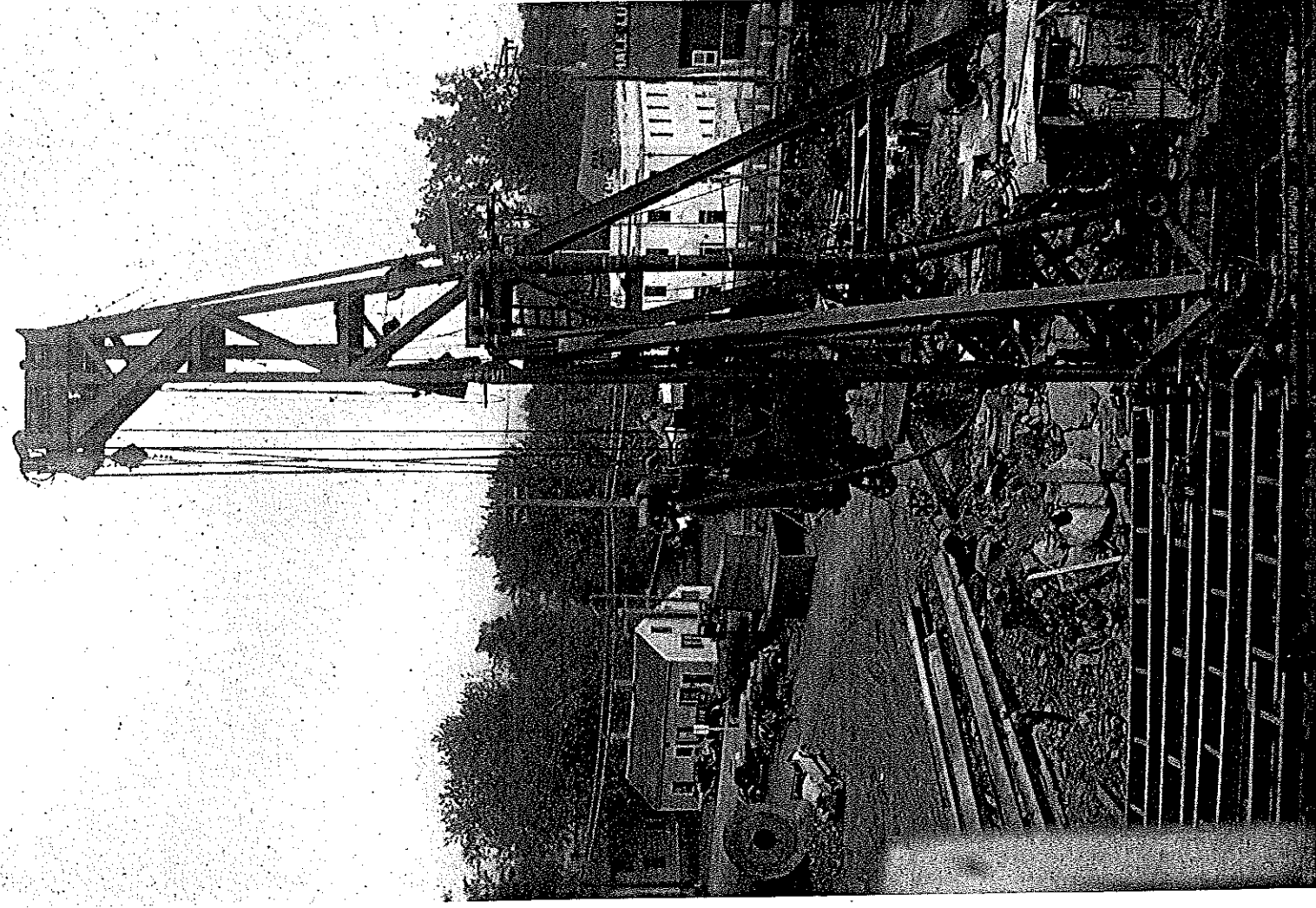
THE MONTEE CAISSON driving machine which rotated and pushed the huge caissons down to bedrock. This was the first time that these machines were used in bridge building.

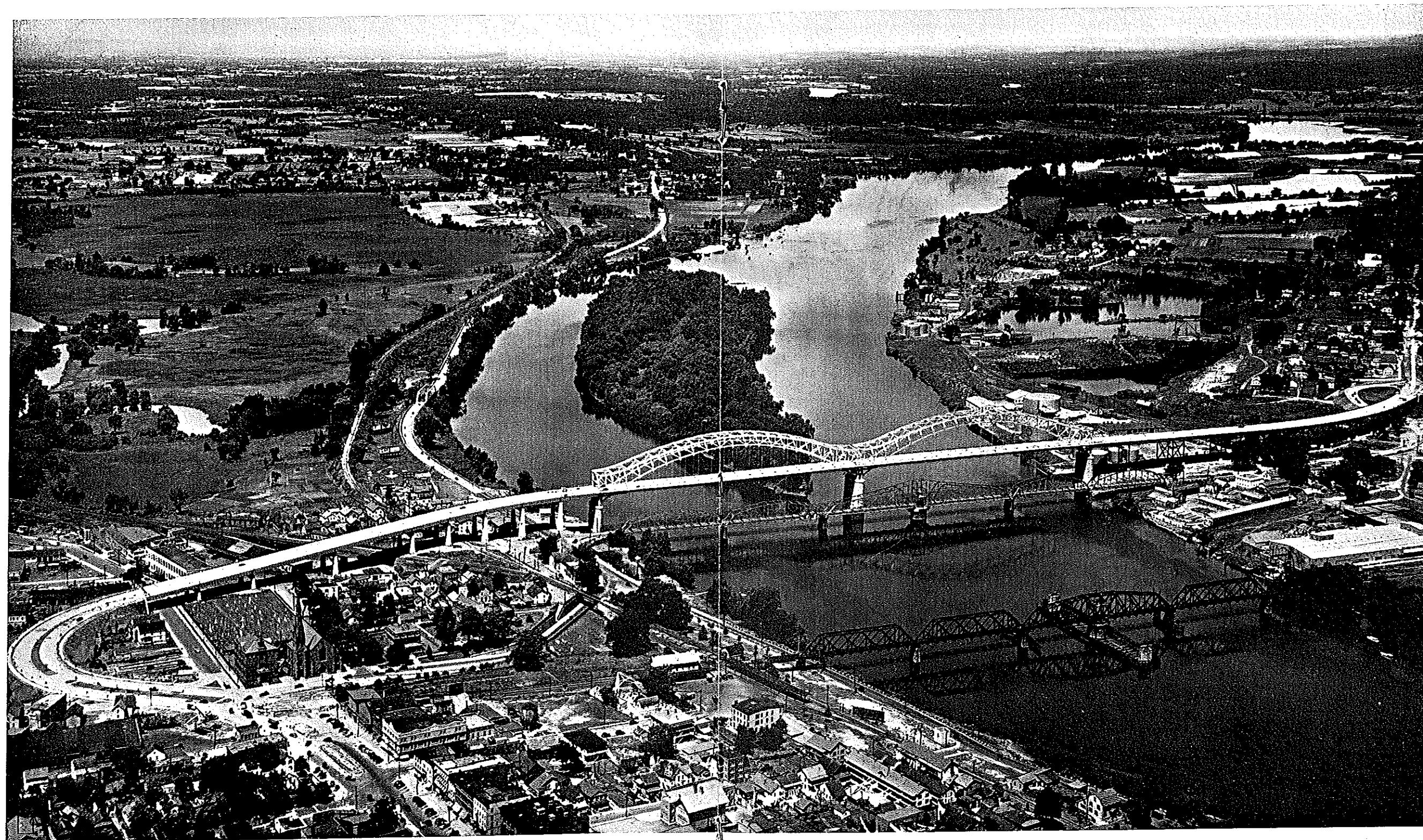


ONE OF THE NUMEROUS DIFFICULT TASKS which confronted the contractors was the moving of the Montée caisson driving machine from one caisson, when completed, to its next position.



THESE CAISSONS WILL BE CUT OFF 20' below the water level by blow torch, covered first with a 10' concrete slab, then with a 2' concrete slab the exact size of the pier they will later support.

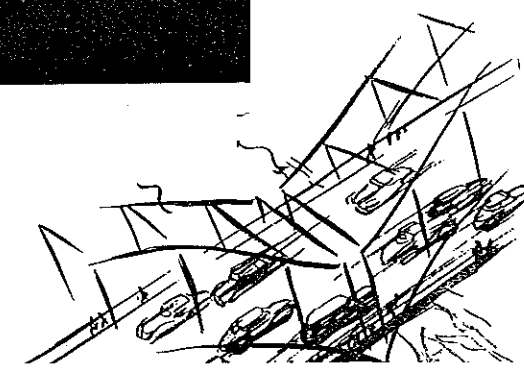
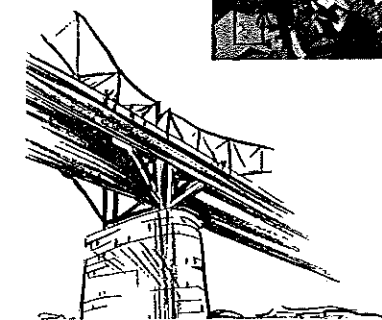


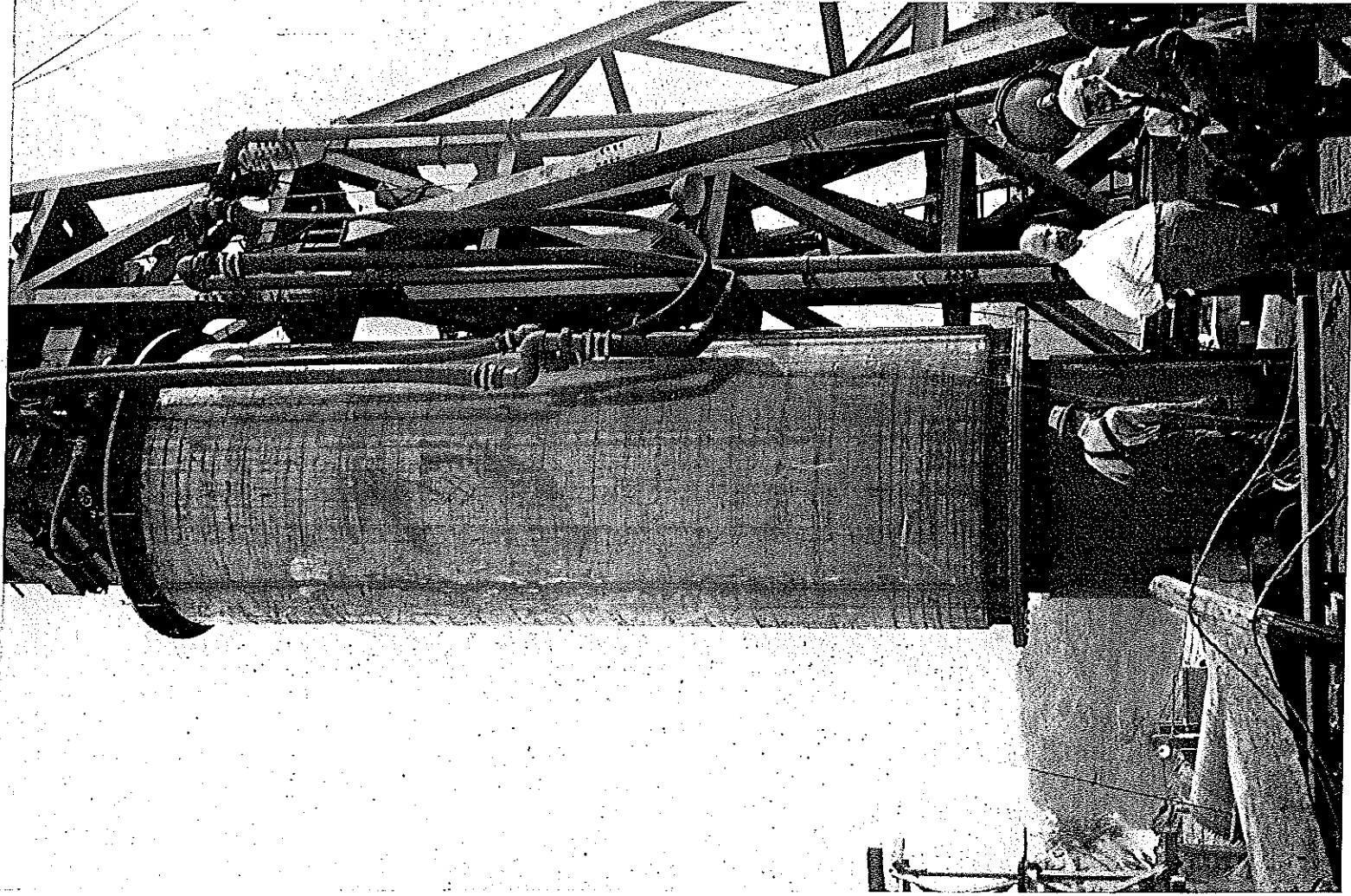


Photographed by 1181b Photo Section, A.C., C.N.G.

THE OLD AND THE NEW. An aeroplane view of the two bridges which gives a comparative idea of the size of the new structure. It is the largest bridge in New England, built of steel and concrete at a cost of \$3,500,000. Designed and built under the direction of the State Highway Department, it is 3,420

feet long or $2/3$ of a mile. But it is more than a mass of concrete, steel and granite. It is the happy culmination of years of planning and cooperation by the Middletown-Portland bridge committee and the citizens of Middlesex County, and is a proud monument to that elusive quality—community spirit.

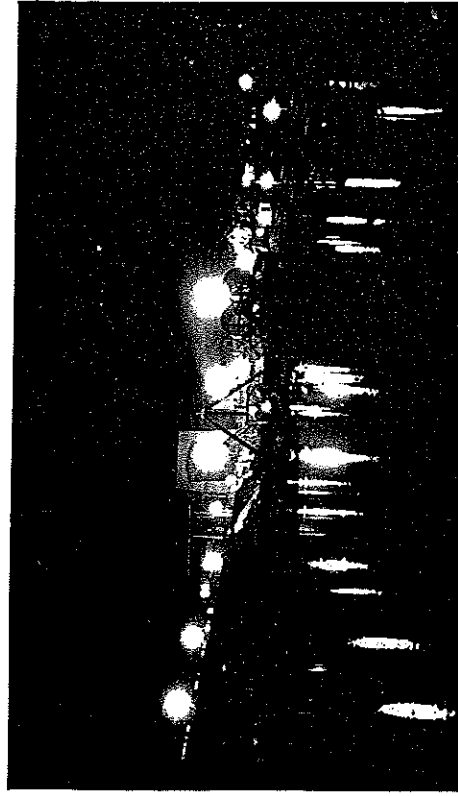




ceased as it has on the Air Line opened to Middletown in 1870 and to Williamantic in 1873, and on the Valley Road opened from Hartford to Saybrook in 1871. The Meriden and Cromwell road constructed in 1885 disappeared some twenty years later. The only railroad in the County now in full operation is the section of the Shore Line on which service was inaugurated between New Haven and New London in 1852.

In the 1890's began the development of electric trolley lines which gave valued service to several localities until a few years ago. Now motor busses operate on all these routes and some others, but the main reliance for passenger transportation within the County for at least a decade has been the private automobiles, first introduced some forty years ago, of which there are over 14,000 registered within the County. While coal and gasoline are usually brought by water, the handling of other forms

IN EXTRA HARD GOING it was often necessary to add weight to the Montée caisson driving machine. The follower, filled with water and rotated with the machine, aided efficiency.



NIGHT AND DAY WORK. The building of the substructure went on 24 hours a day. After years of planning for this bridge, not a stone was left unturned to ensure its completion on time.



CONVERSATION OFTEN WAS DIFFICULT. A view of the elaborate rigging and machinery required to operate the Montée driving machine which is somewhat similar to a pile-driving rig.

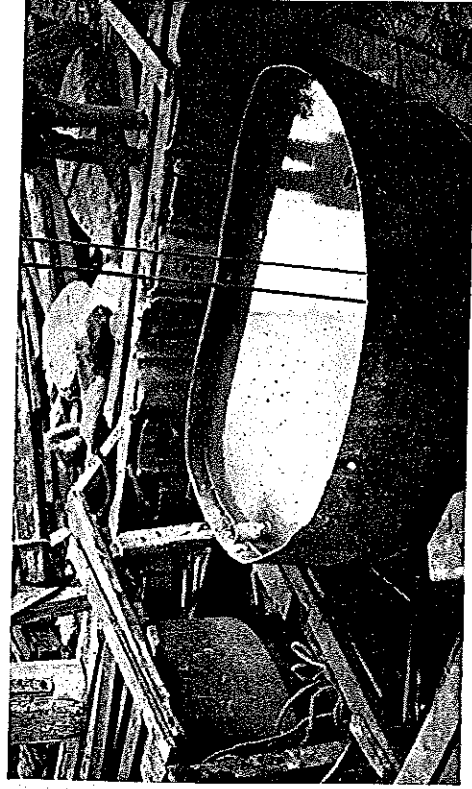
of freight has largely passed to the motor truck. Though several regularly operated air lines cross the County, there is not yet a public airport within the bounds of Middlesex.

Many minerals are to be found in the County but the amounts and grade of ores have precluded mining operations except in a few cases in earlier days. Quarrying, however, has been an important industry at Portland and at many other localities in the County for over two centuries.

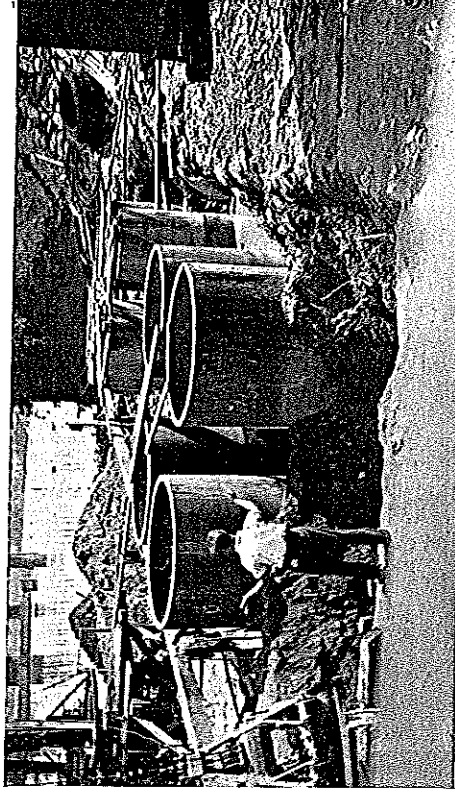
The basic occupation within the County has always been diversified farming. In more recent times there have been efforts at specialization such as tobacco-growing in Portland, fruit-growing in Middlefield, and the florist and nursery businesses in Cromwell and, to a less extent, in nearly every other town.

Shipbuilding and ship-chandlery in various forms have been carried on since the time of the first settlers.

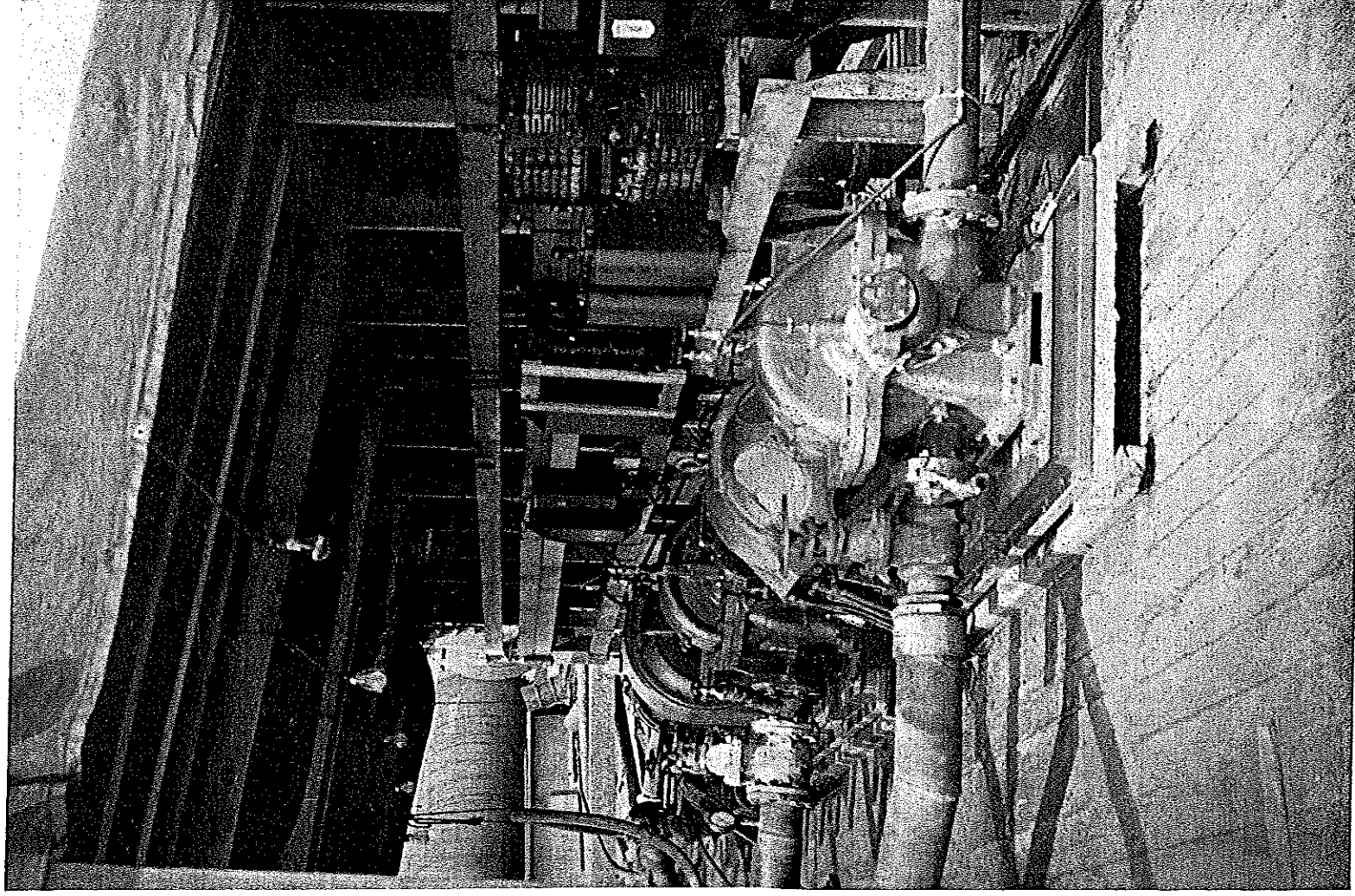
DURING BORING, these pumps forced water under pressure into the caisson, flushing the finer materials through the teeth at the bottom. Heavier material was mucked out by hand.

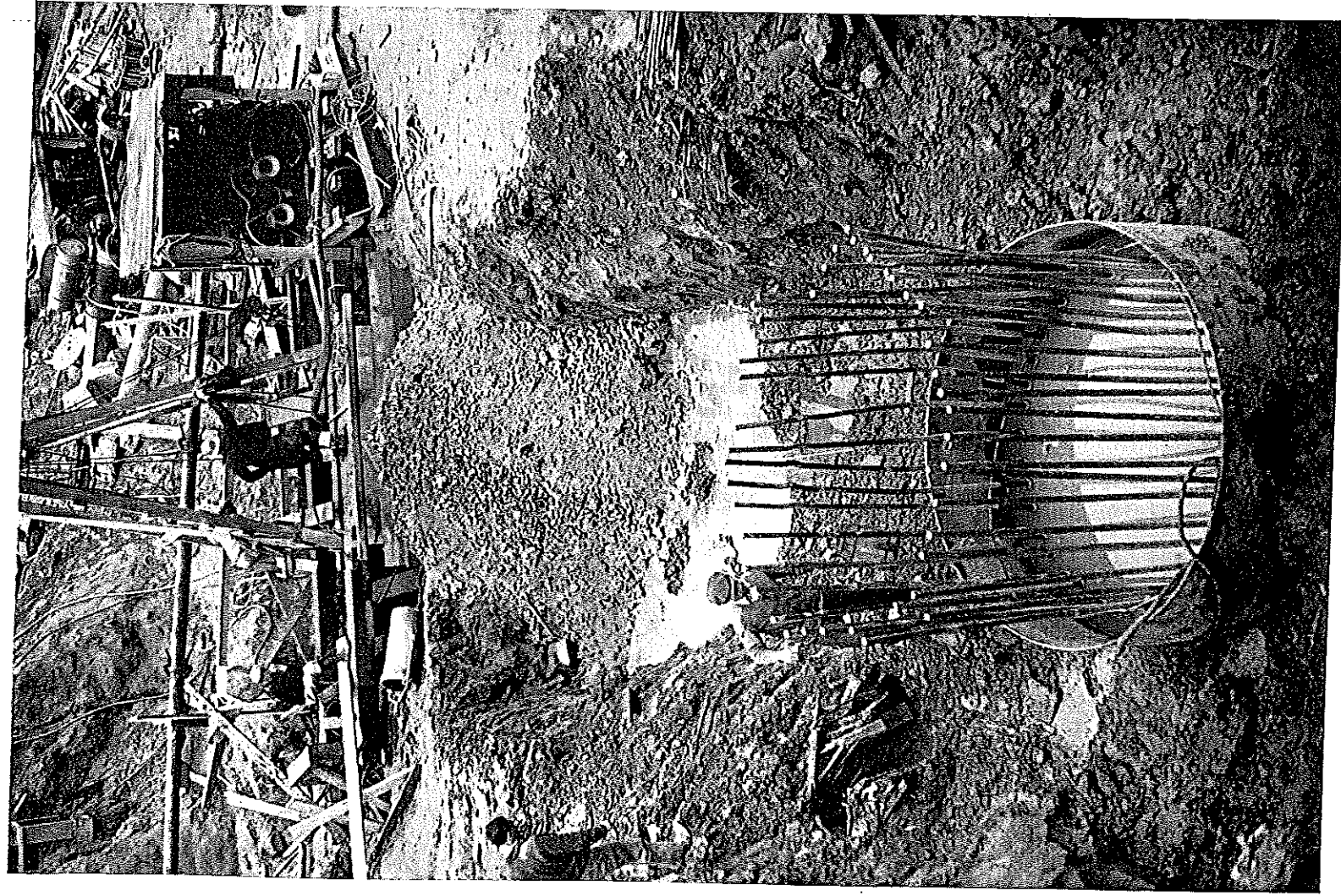


NEAR-CATASTROPHE. Six men narrowly escaped death when this caisson weakened and blew out 100 feet below the surface. It quickly filled with sand and water endangering their lives.



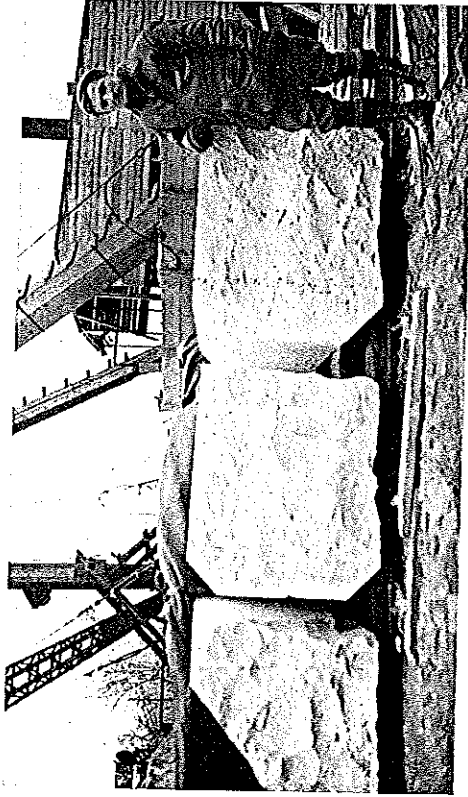
FOUNDATION OF THE PIERS. Eight caissons were used as the foundation of the three main piers of the bridge. Two caissons each were used under eight of the viaduct piers on either side.



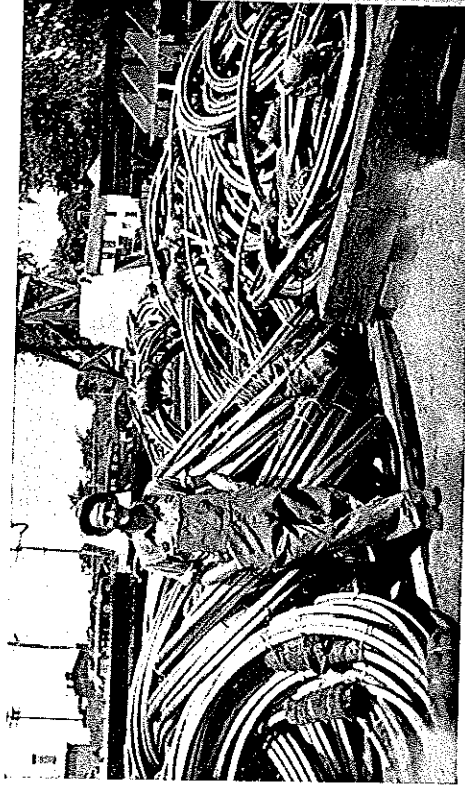


Textile industries were among the earliest and are still important. In earlier times gristmills, sawmills, and tanneries were necessities, numbering in 1819, 53, 82, and 55 respectively. At the beginning of the nineteenth century the making of swords, gunpowder, pistols, and other firearms flourished, especially in the vicinity of Middletown. For nearly a century the city was the seat of an important pump factory. Middletown was one of the earliest cities to engage in the manufacture of rubber goods and more recently it produced the first noiseless typewriters. Like other sections of Connecticut, Middlesex County has been noted for its specialized industries scattered in the small towns. Middlefield was famed for its clothes wringers and is now known for its gun sights. Chester makes auger bits; Clinton, Pond's extract; Cromwell, toys; East Haddam, twine; East Hampton, bells; Essex and Deep River, piano keys and other

SETTING THE DOWELS. The columns and piers are tied to their foundation by steel dowels which are embedded in the concrete filled caissons. The picture shows the dowels in place.



SIX TON GRANITE BLOCKS. The coping of the three piers was made of 6 ton granite ashlar blocks. The entire granite facing was used as a mold into which was poured the concrete for the pier.



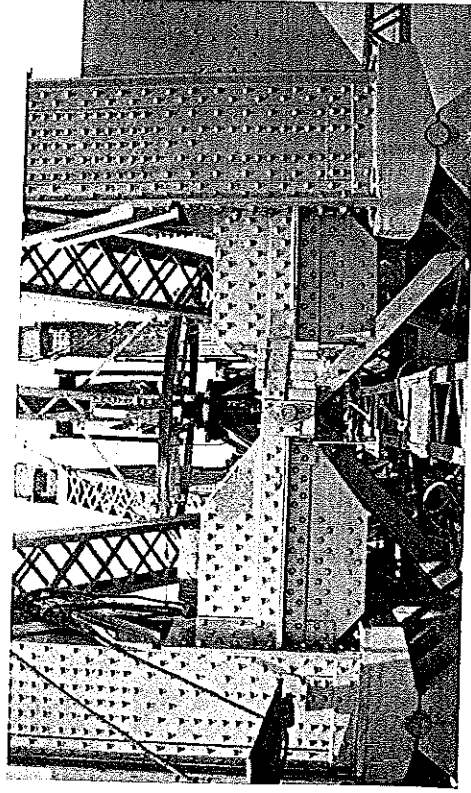
THESE HUGE COILS ARE SUSPENDERS. They are the 1 1/2" steel cable which hangs from the arches and is used to support the deck. Tremendously strong, they are made up of many smaller cables.

articles of ivory, and Portland, chemical fertilizers. Essex boasts a blacksmith shop operated for over two centuries, which is believed to be the oldest business in the United States conducted continuously by the same family.

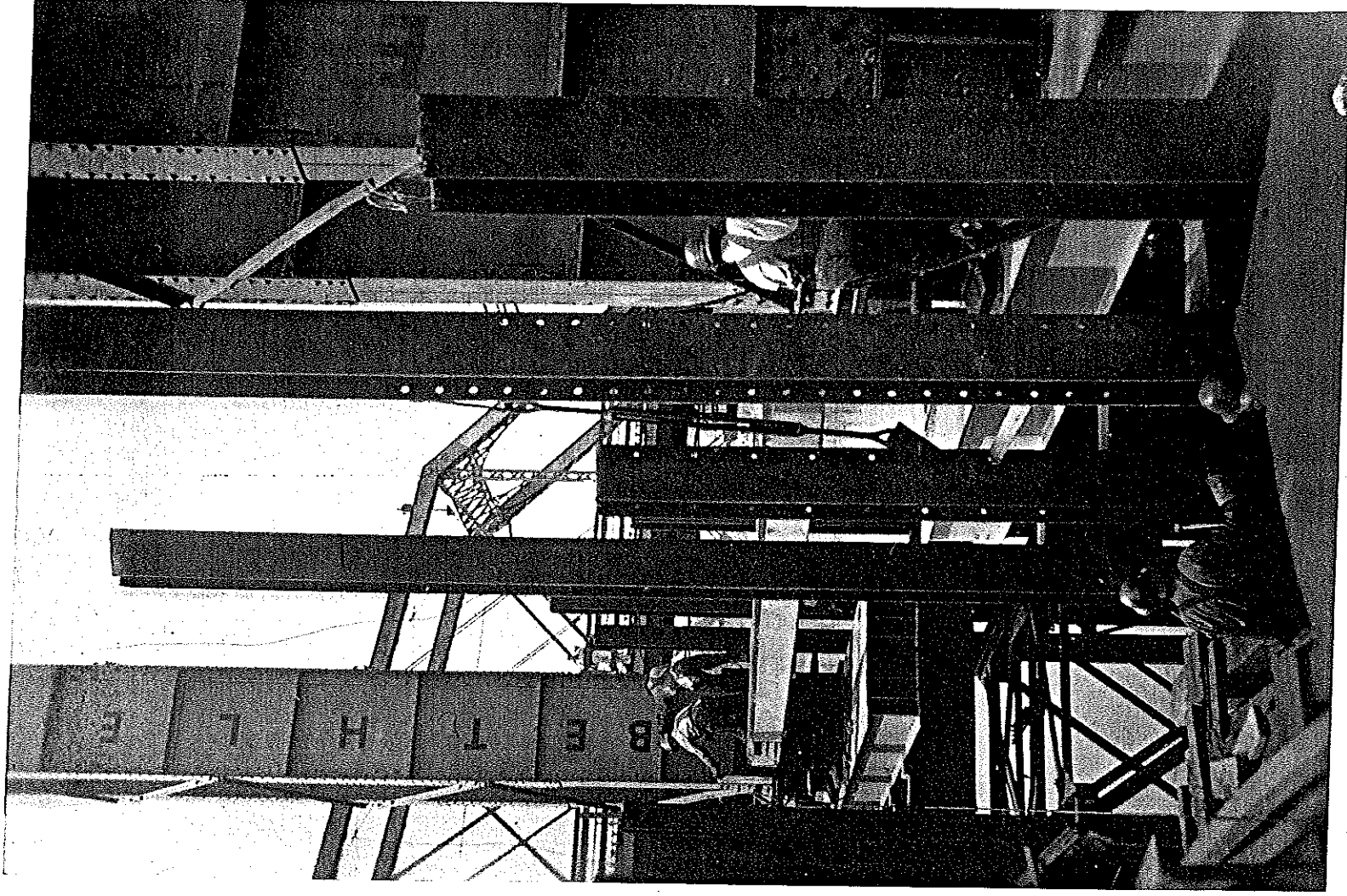
As the established religion in the Colony, Congregationalism provided the only churches in the County during its first century. The Saybrook Platform, framed at Saybrook in 1708, was long the basis of Congregational polity in the Colony and the State. Episcopalianism was introduced about 1750, Baptists and Methodists appeared shortly before 1800, and Lutherans a century later. Roman Catholicism became active with the coming of Irish immigrants a century ago and now rivals Congregationalism for denominational leadership in the County.

Immigration has greatly changed the character of Middlesex's population during the last hundred years.

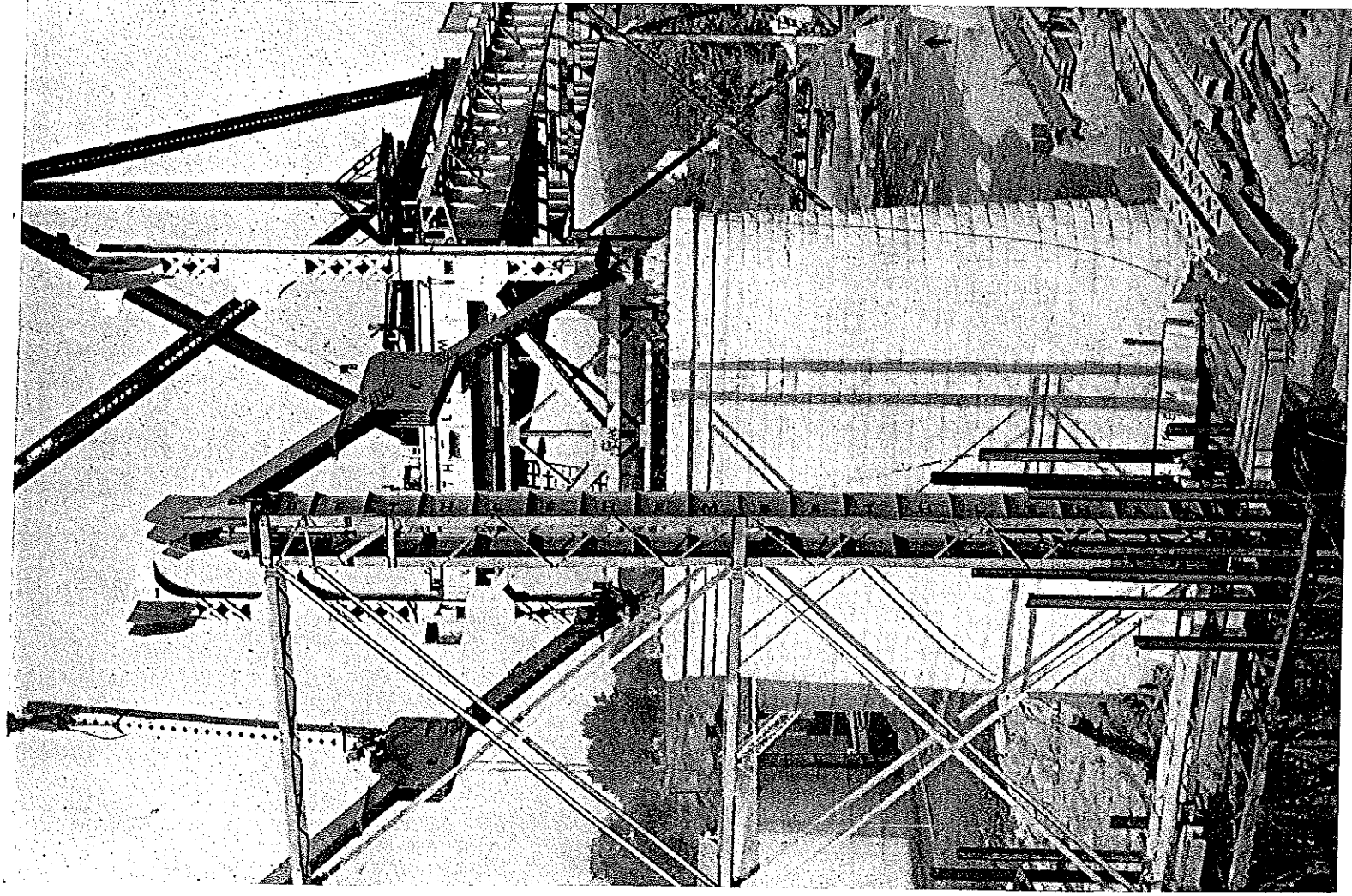
CLOSE-UP VIEW OF THE FALSEWORK, used for temporary support of the steel superstructure. The large girder seen in the rear was used later in the floor of the bridge itself.



RIVET PATTERN. In the bridge structure over 110,000 field rivets were used. Because of the importance of the whole bridge from the standpoint of safety, each rivet was individually inspected.



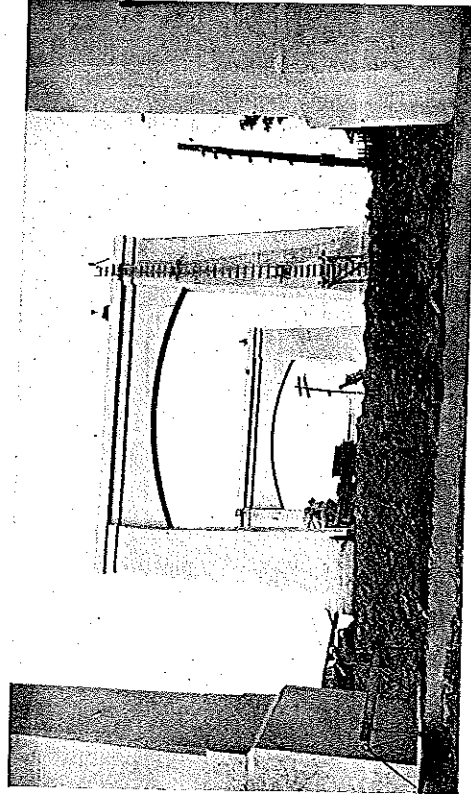
SOME OF THE RIVETING GANG. Every precaution was required for safety. Fibre hats had to be worn in order to save skulls. Occasionally one would take a chance and go without until—



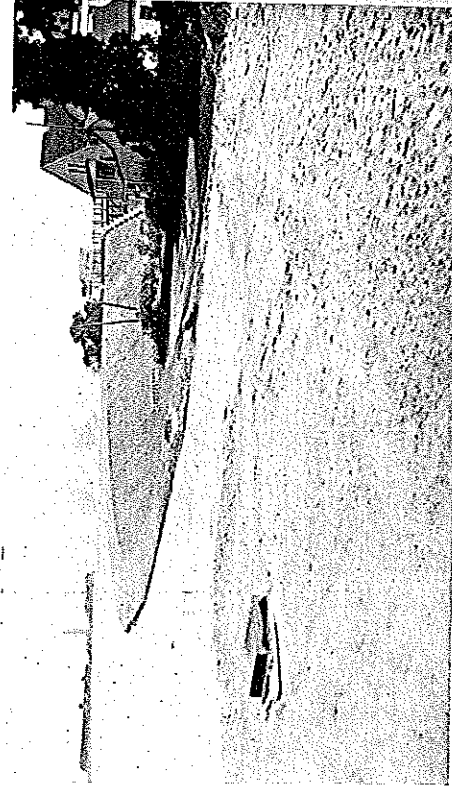
In 1819, David Dudley Field could write: "The first settlers were almost exclusively of English extraction, and with their descendants individuals from other nations have rarely intermixed." The change began with the Irish who came in considerable numbers in the quarter-century following 1845. About the same time a few families arrived from Scotland. The next groups were the Germans and the Swedes who came to this County mainly between 1875 and 1900. In still larger numbers came the Italians and the Poles between 1890 and 1914. Small numbers of Jews, Greeks and others have also settled in the County. The period of extensive immigration closed with the World War.

Middlesex County also had its period of emigration. In the colonial era people moved from Middlesex to newer sections of the State; thus Norwich was founded in 1659 by a

FALSEWORK ERECTED DURING CONSTRUCTION. The foreground shows the falsework reinforced by steel piles. The derrick is swinging the first bridge members into position.



CLASSIC SIMPLICITY OF THE VIADUCTS. The viaduct piers on either side of the span are made of reinforced concrete, supported on sound foundations. The simple lines conceal great strength.



THE MIDDLETOWN APPROACH FILL. New approaches required a great amount of fill varying from 10 to 30 feet in depth, much of the material coming from new road excavation.

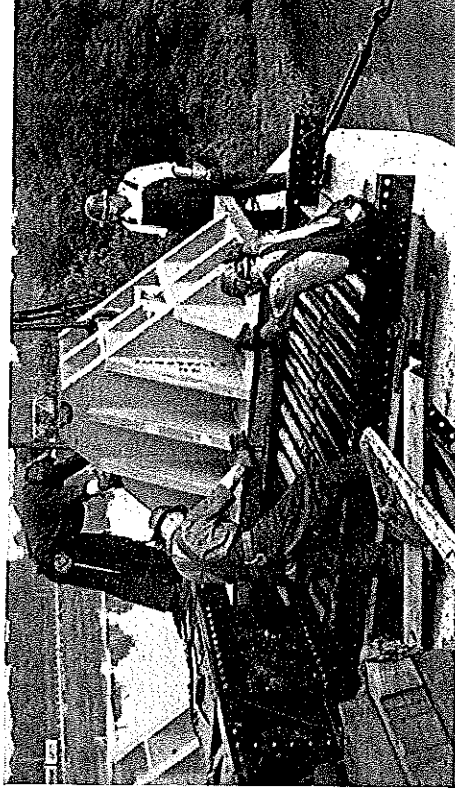
group from Saybrook. Just before and just after the Revolution the movement was into Western Massachusetts, Western New Hampshire, and Vermont. From 1785 to 1840 the population of the County remained almost stationary so great was the migration, especially to Central and Western New York, and to Ohio, whose earliest settlers included Generals Samuel Holden Parsons and Return Jonathan Meigs from Middletown.

General Phineas Lyman of Durham recalls the County's participation in the Colonial Wars, as Parsons and Meigs, Joseph Spencer of East Haddam, Comfort Sage of Middletown, James Wadsworth of Durham, and David Bushnell of Westbrook recall its share in the struggle for Independence; and Commodore Macdonough, in the War of 1812. The British raid on the shipping at Essex in 1814 was the only warlike event of importance that has oc-

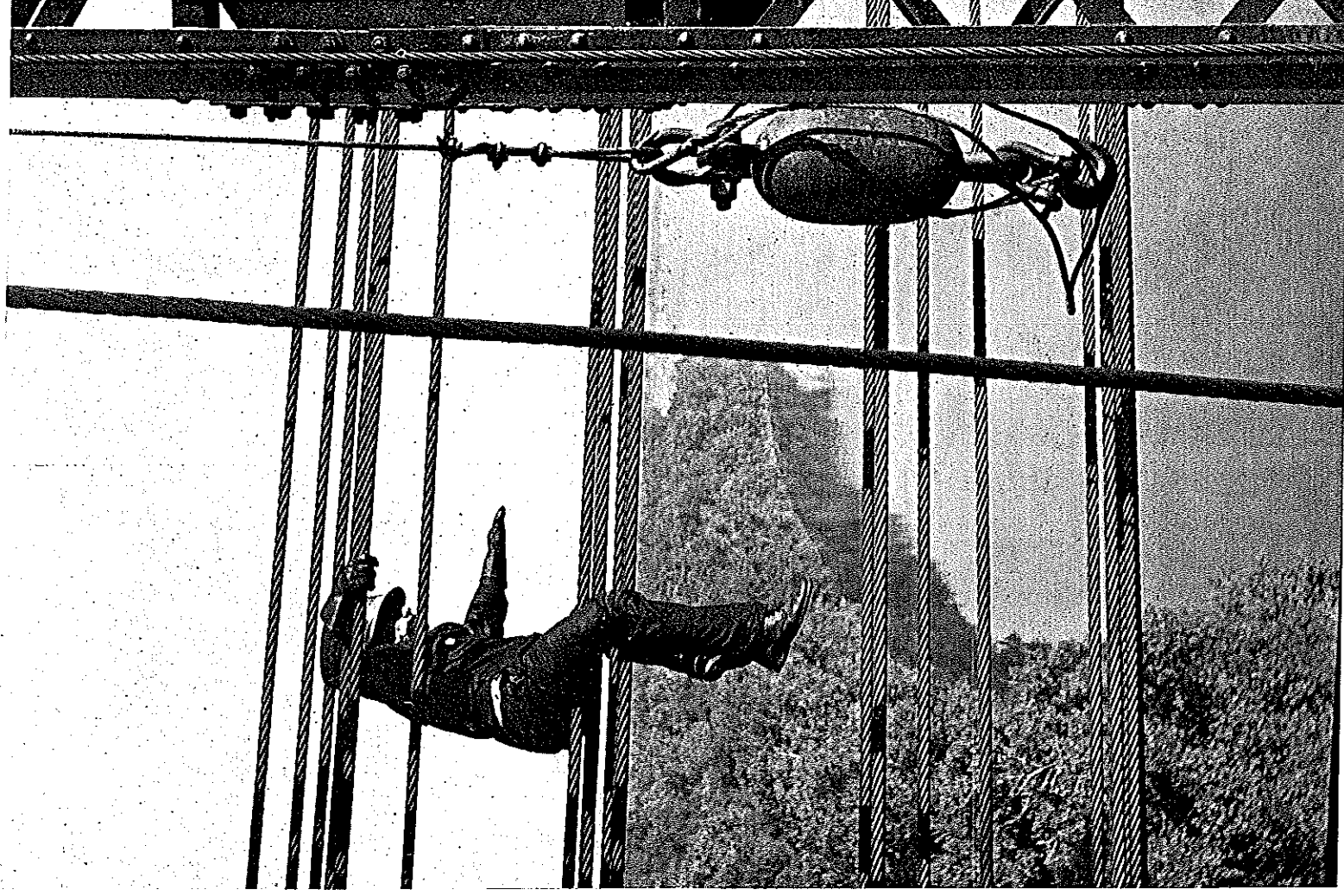
THIS IRON WORKER'S left hand rests on a piano wire pulled taut to the proper level. With this as a guide he gives instructions for the correct adjustment of the cable tie-backs.

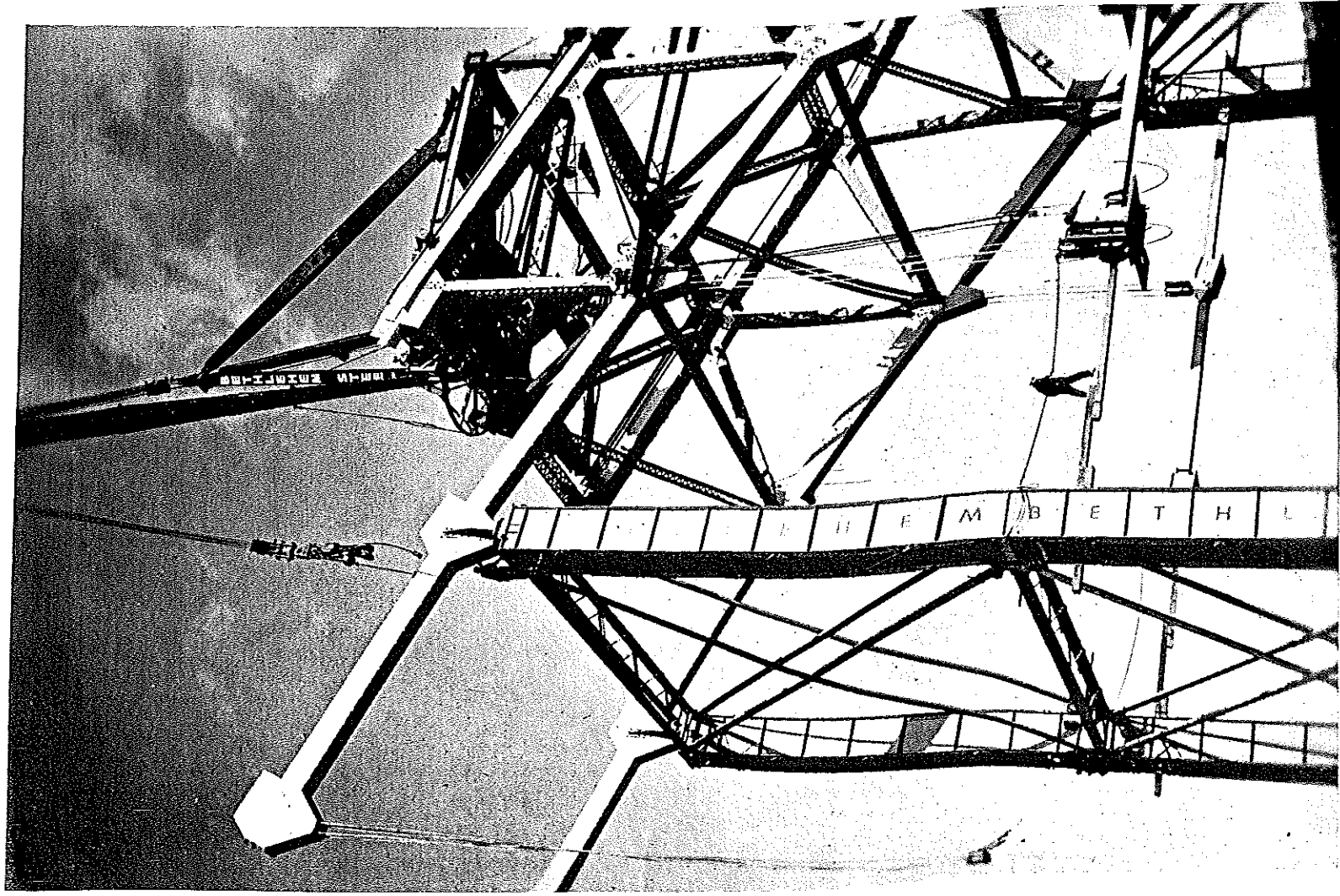


HANDLING HEAVY CABLE. That snake-like thing is called a Killam's grip. It is a tube, one end of which clamps on a heavy cable, the other end on a lighter one which can be easily handled.



HEAT AND COLD AFFECT EVEN A BRIDGE. These 18-ton steel shoes upon which the bridge rests are on rollers which allow for 20" expansion and contraction over a temperature range of 150°.



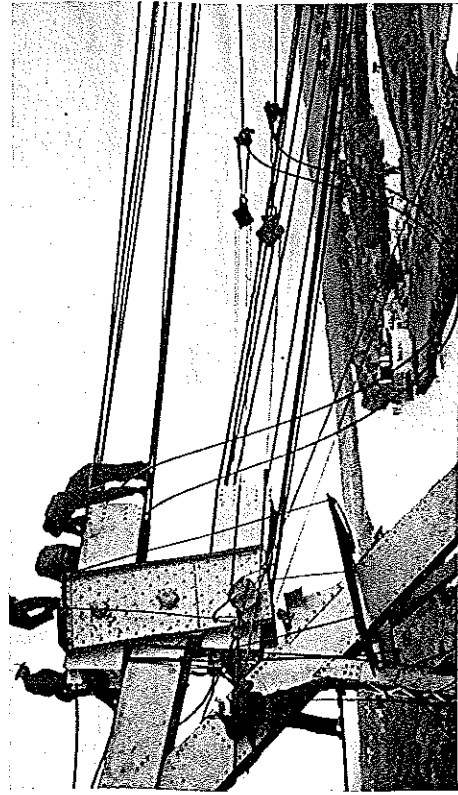


curred in the County. Memories are still lively of the parts played by Middlesex men in the Civil War, the Spanish War and the World War.

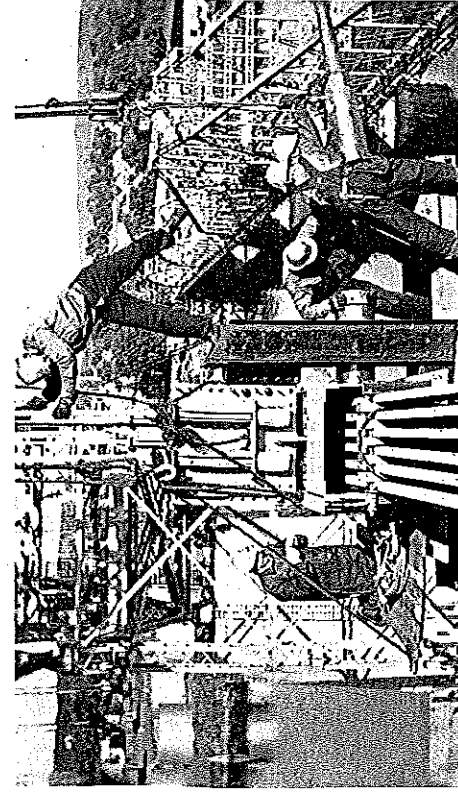
The *Middlesex Gazette*, established in 1785, the *Sentinel and Witness* started in 1823, and the *Press*, dating from 1884, together with shorter-lived papers, have given Middletown and the County over a century and a half of journalistic service. The *Clinton Recorder*, the *Deep River New Era*, and the *East Hampton News* give evidence of newspaper enterprise in other parts of the County.

The earliest post offices in the County were established at Middletown, 1775; Saybrook, 1793; Killingworth (Clinton), 1794; Durham, 1800; East Haddam, 1800; Haddam, 1802; Chatham (Portland), at Knowles' Landing, 1804; Upper Houses (Cromwell), 1809; and Chester, 1810. Middletown received its city charter in 1784, and

SAFETY FIRST. The iron worker figures that wherever he can place his foot is a safe place to walk. Here, however, a hand line is provided as a guard rail for his 8" x 8" walk.



CABLES BEING ADJUSTED. The lining up and adjustment of the steel cables presents a much more difficult problem than handling rope. Tackle, derricks, men, courage and patience are needed.



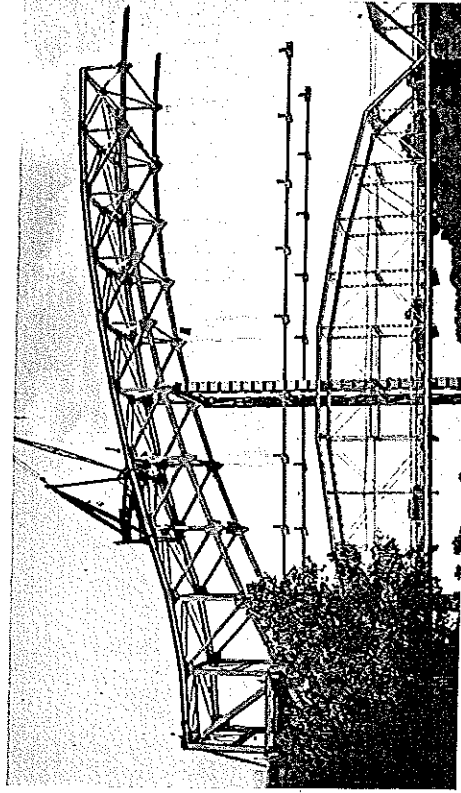
SOME TASKS WERE HAZARDOUS. Driving home the pins that hold the eye-bars, called for extreme courage. The workers here have but small support between them and the river, 100' below.

its customhouse was established in 1795. In the same year the Middletown National Bank was chartered, though not opened until 1801. The Middletown Savings Bank was started in 1825, and the Middlesex Assurance Company eleven years later. Two state institutions are located in the County, both at Middletown and both dating from 1868: the Connecticut State Hospital and Long Lane Farm.

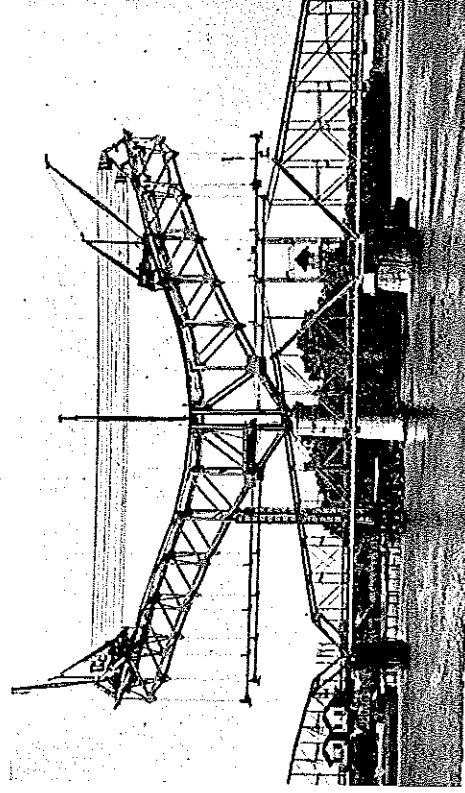
It will always be remembered that the Collegiate School which became Yale College was originally established at Saybrook and that its first president was Abraham Pierson, the minister at Killingworth (Clinton). Wesleyan University has, through its faculty, brought to the County some of its most distinguished citizens and has sent out nearly 6,000 graduates. The Middletown High School, which will soon celebrate its centennial, was one of the first public high schools in



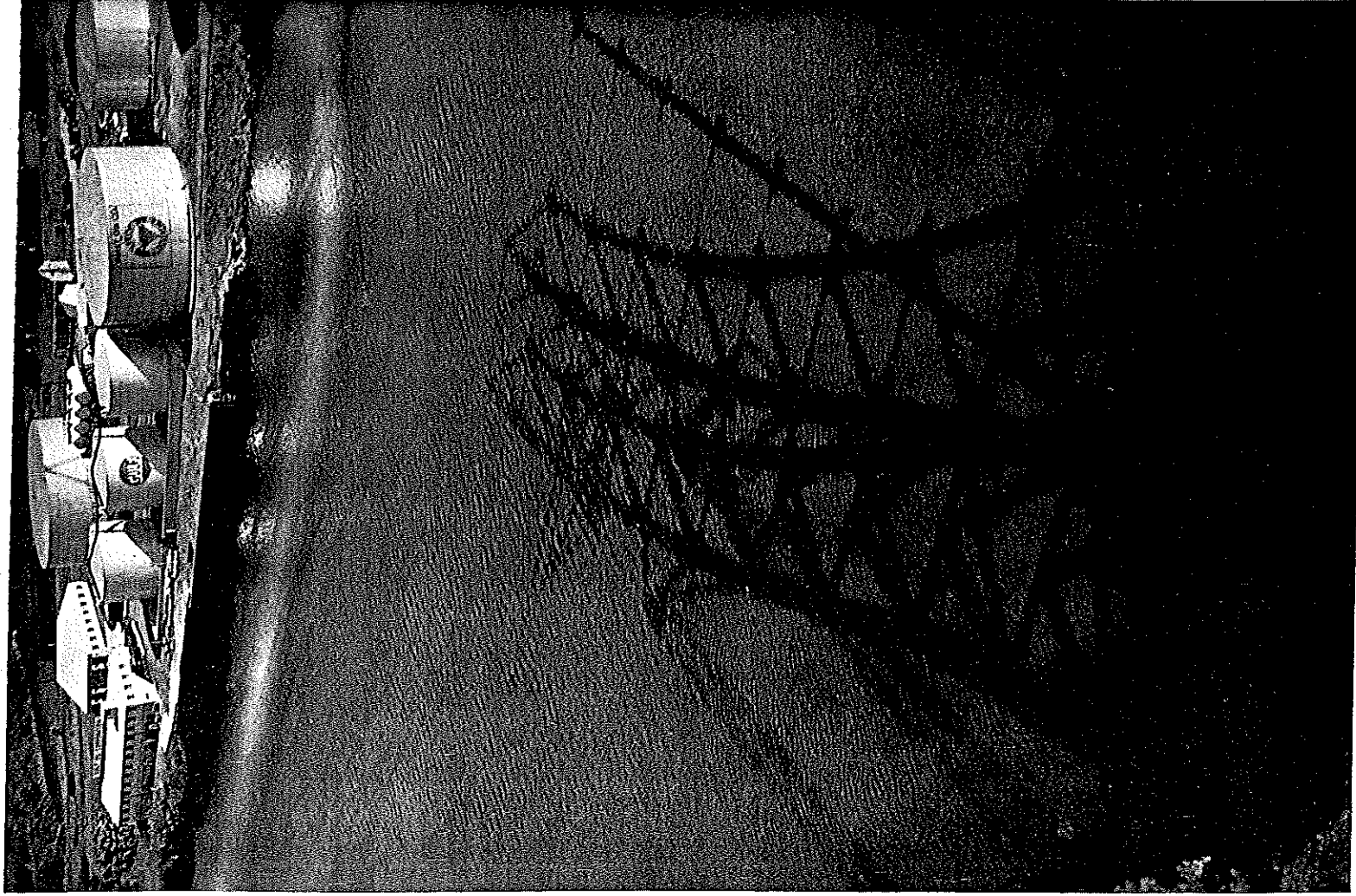
PULLING UP THE CABLES. Especially built catwalks were used by the men who pulled up cables tying the bridge together. The double cantilever method of construction was used here.



THE WEST HALF MIDDLETOWN SPAN is completed. The traveling crane is being removed, its work finished. The long bars at the bottom to which the vertical cables are attached are called eyebars.



FALSEWORK COULD NOT BE USED on the east side because of obstructing the channel. So both ends were tied together with $1\frac{1}{2}$ " steel cables, using supports on the west side only.

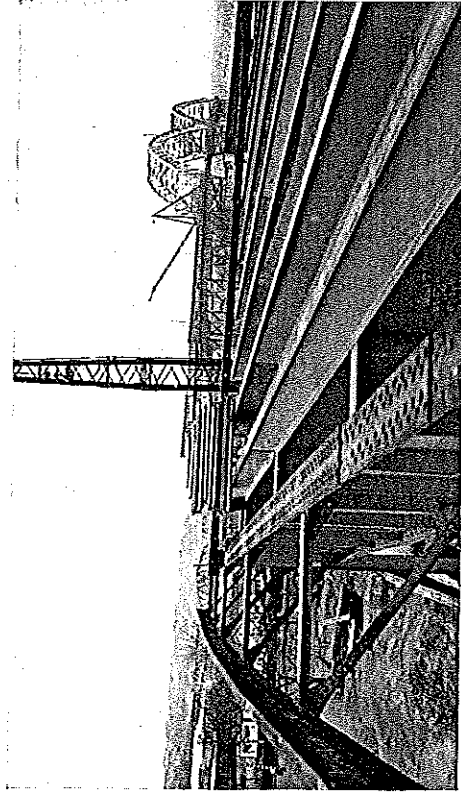


America. The Middlesex County Historical Society, organized in 1901, preserves valuable souvenirs of the olden times and keeps alive the memories of the worthies of other days and their deeds.

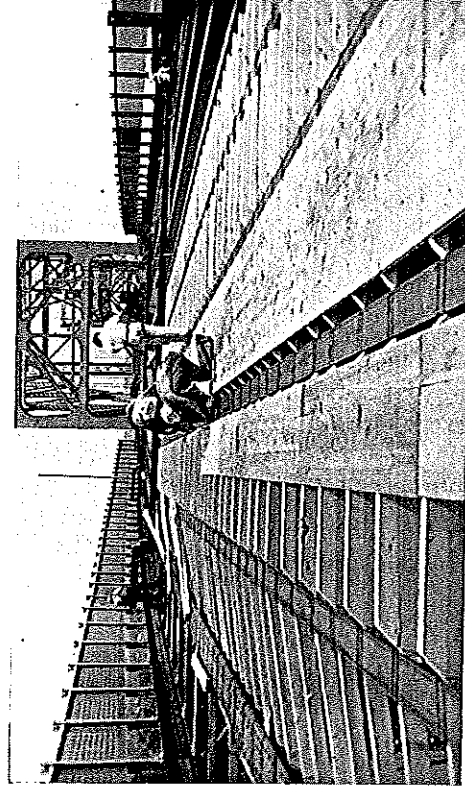
Middlesex for nearly two centuries has had eminent lawyers and many members of the County bar have served as judges of the higher courts of the State. Ever since the eighteenth century the medical profession in the County has been adorned by distinguished names. The Middlesex County Medical Society, founded in 1792, is one of the oldest in the country, and preceded by some months the State Society which was also organized in Middle-town. For forty years the Middlesex Hospital has served this County with marked efficiency.

An adequate enumeration of the County's distinguished sons and daughters would lengthen this article unduly. One native and two citizens of Middlesex have served the State as governors—M. G. Bulkeley, O. V. Coffin, and F. B. Weeks—and

EACH DAY RECORDS A CHANGE in the shadow as rivet by rivet, member by member, the bridge assumes its final shape. Soon land and river traffic will begin their unimpeded flow.



IN ORDER TO MEET TOPOGRAPHICAL conditions and to keep the grade at a minimum, the approaches to the bridge are approximately $\frac{1}{4}$ of a mile long on both the Middletown and Portland sides.

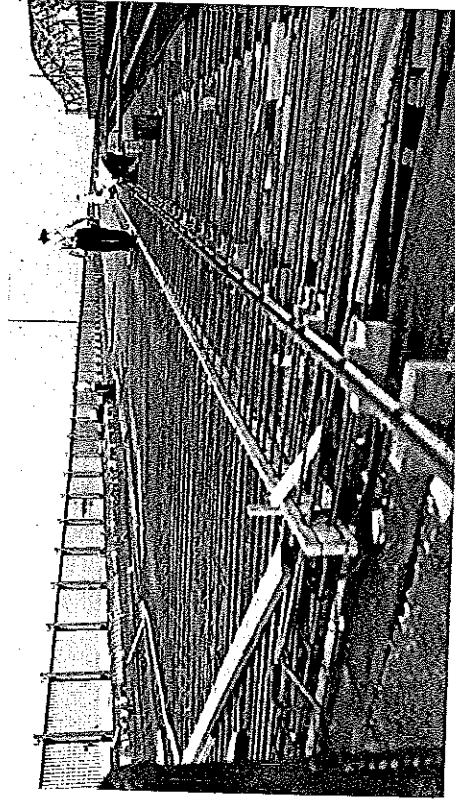
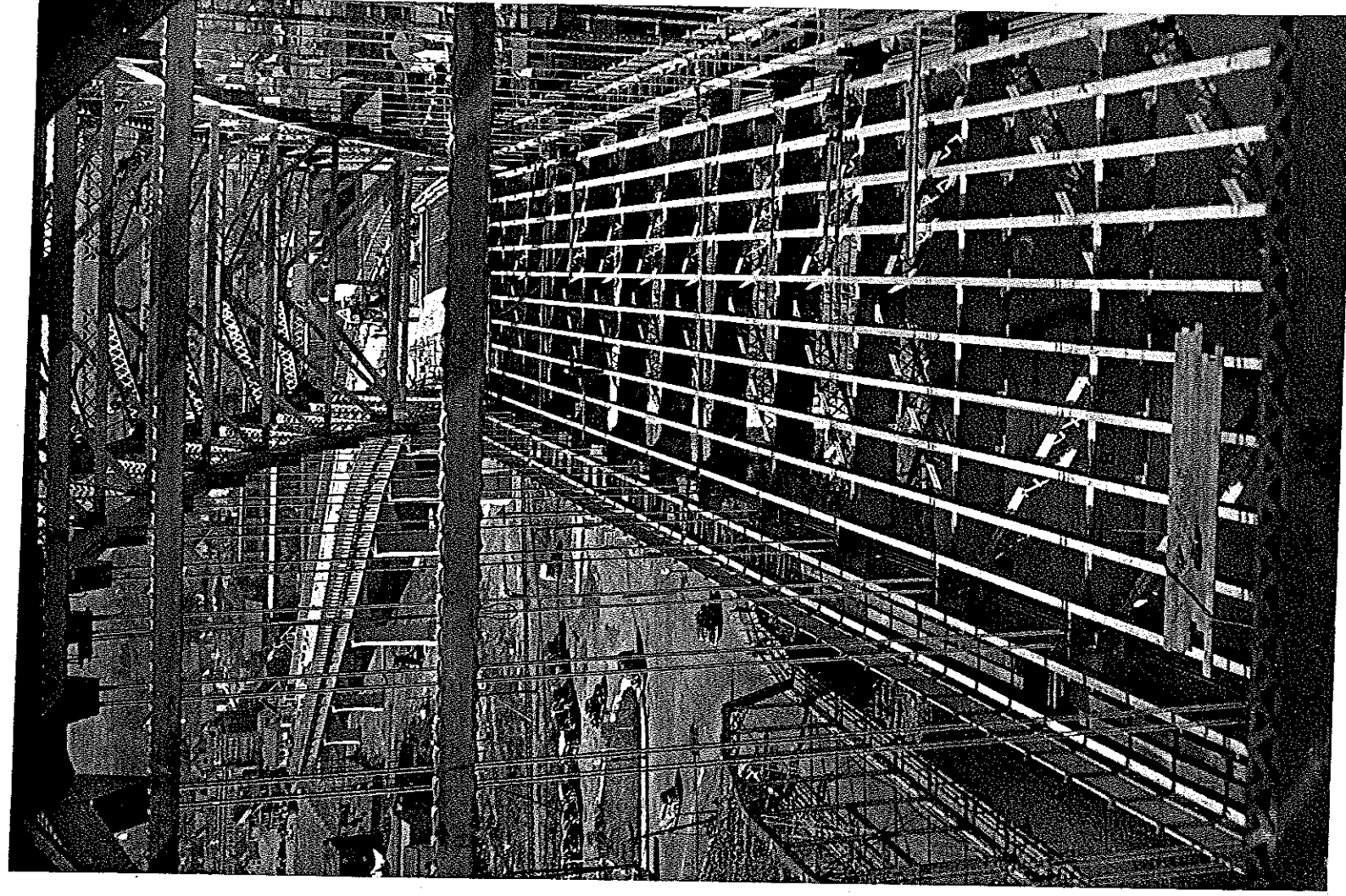


BEFORE THE CONCRETE can be placed, it is necessary to construct wooden forms which are supported by the steel floor system. After the concrete has hardened the forms are removed.

various others have held state offices. Chauncey Goodrich of Durham and Samuel W. Dana, long mayor of Middletown, served in the United States Senate; several citizens of the County have sat in Congress; and Stephen J. Field, a native of Had-dam, served on the Supreme Court for thirty-five years; Return Jona-than Meigs, Jr. and Samuel D. Hubbard were Postmasters General. Richard Alsop was the County's most famous author; Wedworth Wadsworth was a distinguished landscape painter; Reginald De Koven, the musician and composer, was born in Middletown; and William C. Redfield, another native of Middletown, was the first president of the American Association for the Advancement of Science.

For a County whose population has only just passed the fifty thousand mark, Middlesex has had a proud history, which is a worthy challenge to our generation and to future dwellers within its pleasant borders.

A MAZE OF CABLES AND STEEL. This view shows the girders on the floor of the bridge before the flooring was laid. The Middletown approach was at this time practically completed.



CONCRETE REINFORCING. On the viaducts, a concrete floor $7\frac{1}{2}$ " thick was laid. On the bridge proper only a $3\frac{1}{2}$ " flooring was used in order to save weight, but it was specially reinforced.



INGENUITY AGAIN TO THE FORE. Instead of using a hand vibrator to pack the concrete into the steel grid, three pneumatic drills pushing a section of railroad track speeded the operation.

THE MIDDLETOWN-PORTLAND BRIDGE CELEBRATION



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His Excellency, WILBUR L. CROSS, Governor of The State of Connecticut
Honorary Chairman



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ORGANIZATION COMMITTEE: Samuel S. Mattes, Chairman; Hon. Arthur V. McDowell, Fred N. Smith.

*Deceased.



State of Connecticut
Middletown-Portland
Bridge Commission

T. M. RUSSELL, Chairman
ELWIN T. CLARK, Secretary
ANDREW N. SHEPPARD
CHARLES T. DAVIS
FREDERICK J. BIELEFIELD

A Bill is now before the Legislature asking for an appropriation of \$500,000.00 for the purchase of the necessary right-of-way and for building the approaches to a new bridge across the Connecticut River between Middletown and Portland.

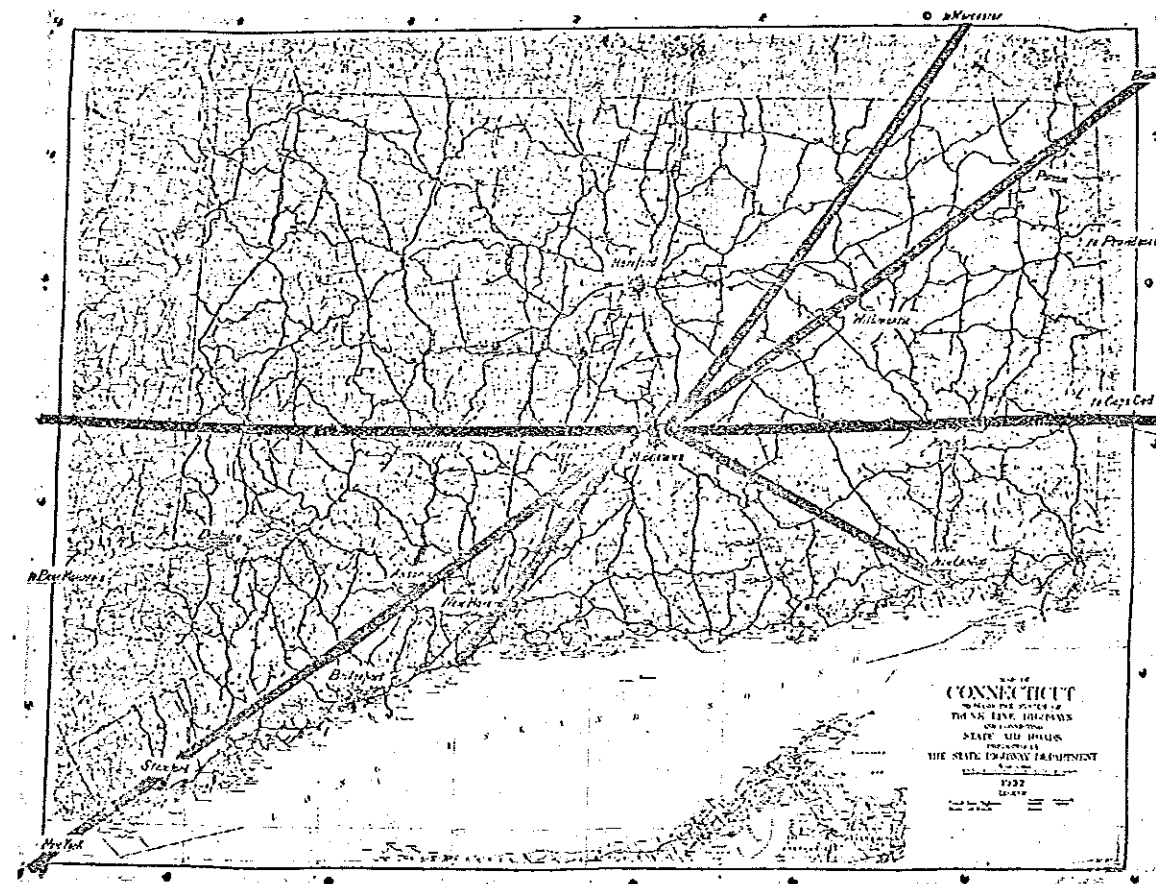
The ultimate cost of the completed structure, including right-of-way and approaches will be between three and one-half and four million dollars. This is a very large sum even in prosperous times, and there must of necessity be the best of reasons presented before favorable action from the Legislature can be expected.

This Commission might present a more exhaustive report giving facts, figures and statistics covering the condition of the present old drawbridge, and the inconvenience and delay caused to the present volume of traffic, as well as what may be anticipated if this volume increases in the future. The subject is of such importance and so broad that it is well worthy of careful and exhaustive study, but we believe that a relatively brief and comprehensive report will give a sufficiently clear picture to insure favorable action. The Commission stand ready whenever called upon to enter exhaustively into the facts and figures relative to traffic delays, probable increase in traffic and probable cost of maintenance and repairs to the present structure.

The present drawbridge was built by a private corporation in 1896. This, of course, was before automobiles had become any problem at all in the State. The bridge was designed to serve the moderate problem of horse-drawn and pedestrian traffic of those days. Operation of the draw was rather an infrequent occurrence, except for the passage of the New York Boats, and delays caused thereby were of minor importance, as there was no heavy traffic to be tied up and delays of ten or fifteen minutes of a few vehicles in those days meant little.

Today this bridge is entirely inadequate to meet the needs of modern traffic. It is wide enough for only one line of traffic in each direction, and it frequently happens that one horse-drawn vehicle may delay the whole stream following it for six or seven minutes, the time it takes the horses to cross the bridge. An opening of the draw causes a stoppage of traffic of from ten to twenty-five minutes, and on busy days, frequently stops several hundred cars in each direction for all or part of that time. There are days when the draw has to be opened from twelve to fifteen times in the twenty-four hours.

When west bound traffic approaching Middletown starts after the draw has closed, there is a very serious congestion at the Middletown end of the bridge, as the north bound traffic on the Main Hartford Road is interrupted to permit the passage of the west bound bridge traffic, as the two lines have to cross on the same level at this point. This north bound traffic embraces everything from the New Haven Turnpike to the Saybrook Road, including the



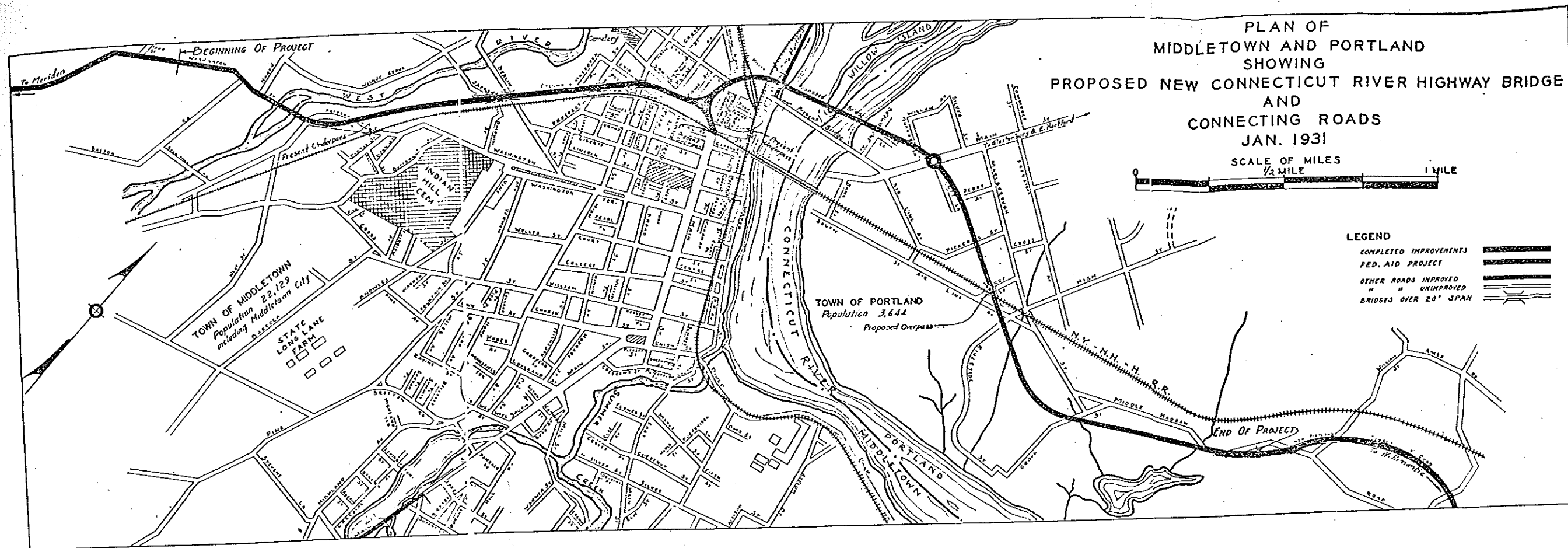
Branford, Guilford and Madison routes, and it all concentrates on this one highway through Middletown past the end of the bridge.

There have been times on days of extremely heavy Summer travel when traffic has been blocked for three miles east of the bridge and five or six miles south or almost to Higganum. Fourteen thousand vehicles have crossed this bridge in one day.

This condition would be very serious and deserving of relief even though it were almost entirely a problem affecting local communities, but a study of the above map prepared by the State Highway Department discloses some very interesting facts regarding the Highway System of our State, and why Middletown is the natural point of concentration of a vast and ever-increasing flow of east and west bound traffic, as well as of practically all the north and south bound traffic between Branford and Saybrook and points above Middletown.

The straight air lines between New York and Boston, New Haven and Worcester, Waterbury, Fall River and Cape Cod all pass directly through Middletown and the natural development of main highways between all these important points has naturally followed these shortest lines and is concentrating the steadily increasing traffic at Middletown.

Geographical location and the logical and systematic development of our highway system require that this absolutely vital link in our transportation scheme be supplied at the very earliest possible



moment. It is so urgently required for safety as well as convenience and freedom from serious delays to traffic that serious consideration should be given to the possibility of providing the entire amount required for the completion of the whole project within the next three years.

We must recognize the fact that Connecticut is becoming more and more of a thoroughfare for Summer and tourist travel between New York and Southern and Western points, and Cape Cod and the Coasts and Mountains of Maine and Massachusetts. Not only must we furnish all necessary facilities to these travellers, but even more we must give our own people the means of ready and quick communication and transit between their homes and our own shore and mountain resorts.

Travel statistics will prove that a very large percentage of those passing through our State, and from one section of it to another, either for business or pleasure, will find the routes through Middletown shorter and more advantageous than any other way, and completion of this new bridge and its approaches with the elimination of the disagreeable and trying delays, which now make these routes unpopular, will greatly increase the volume of traffic.

Freight and express transportation by trucks has increased enormously, and laid an additional heavy burden upon our highway system. Whatever our attitude may be in relation to this means of transportation, we must admit the fact that highways are frequently

congested and more traffic delayed if adequate facilities are not available for the continuous and rapid operation of trucks. Neither can we fix limits of weights in accordance with what we would like to have, but we must furnish structures able to carry not only the extreme weights of today but what we must reasonably look for in the future, and the traveling public should not be exposed to the danger lurking in an antiquated structure, which will, from time to time, be subject to destructive loads even in the height of traffic. Even the most exhaustive examination will sometimes fail to reveal defects or potential dangers of failure in so complex a structure as a long highway drawbridge.

A few years ago the State had to undertake very extensive repairs on the old bridge, and a large amount of money was required. Within a few years more other heavy expenditures of a like character will be required. All the time the expense of maintenance and operation is increasing, and it certainly seems unwise to continue lavishing large sums on an antiquated and inadequate structure, which will ultimately have to be condemned and replaced any way, when by a reasonable expenditure in these times of extreme low prices for material, a new and adequate structure can be provided which will serve all needs for very many years to come.

It is worthy of note that certain heavy equipment now used in road construction and similar work cannot cross any of the Connecticut River bridges below Hartford without obtaining a special

permit, and then only by the observation of special regulations, which sometimes require clearing of the bridge of all other traffic. We certainly should provide adequate means of crossing from one-half of the State to another somewhere in this fifty mile stretch.

No work has been done in the last few years toward completing the main highways east and west of the River for a distance of several miles, pending determination of the location and type of bridge.

The length of the approaches and the new bridge structure will be approximately four and one-half miles, and now that the site for the bridge has been determined, work on the approaches can be undertaken as soon as funds are available. The construction of these approaches will eliminate a number of bad conditions on the present roads, including one railroad grade crossing, and the approaches almost up to the bridge structure itself can be made available and will be of great value even before the new bridge is built.

The half million dollar appropriation now asked for will permit of the purchase of the necessary right-of-way and practical completion of a large part of the approaches during the next two years, by which time, it seems probable that provision can be made for the balance of the required funds to permit of early completion of the bridge structure itself, and the opening to traffic of this important link in the central highway system of the State.

