

Schoolhouses • Frank Gotch & Wrestling • CW&DM Railway • Leo Beranek • Medical Education

Fall 2008 • \$7

Iowa Heritage

ILLUSTRATED



Front Porch

Dear Readers:

Born in Iowa, Leo Beranek attended a one-room school, did fieldwork on a horse-drawn cultivator, learned about radios on a vacuum-tube Crosby receiver operated on batteries. How could he have ever imagined a career in testing noise levels of jets or developing computer software?

Indeed, how could Americans anticipate the sea changes in life and culture in the 20th century—and certainly those changes that will astound us in the 21st.

As Beranek observes in his recent biography (a part of which appears in this issue), “science, technology, and world events will continue to sweep us along a turbulent course of thrills, risks, and opportunities, a track that’s almost always impossible to predict and that may require wholesale shifts in how we view the world and ourselves.”

“Wholesale shifts” have faced every generation, as our other stories point out. In the first half of the 20th century, interurbans and shortline railroads gave way to the automobile. The old model of medical colleges surrendered to colleges with sophisticated labs and improved clinical training. One-room schools yielded to consolidated schools.

Of course, some traditions linger, as represented by this engaging photo of two boys about to participate in Iowa’s tradition of excellence in wrestling. Frank Gotch, whose story is told in this issue, was an early representative of that tradition, which was passed on to Dan Gable and beyond.

Undoubtedly—and unfortunately, given space

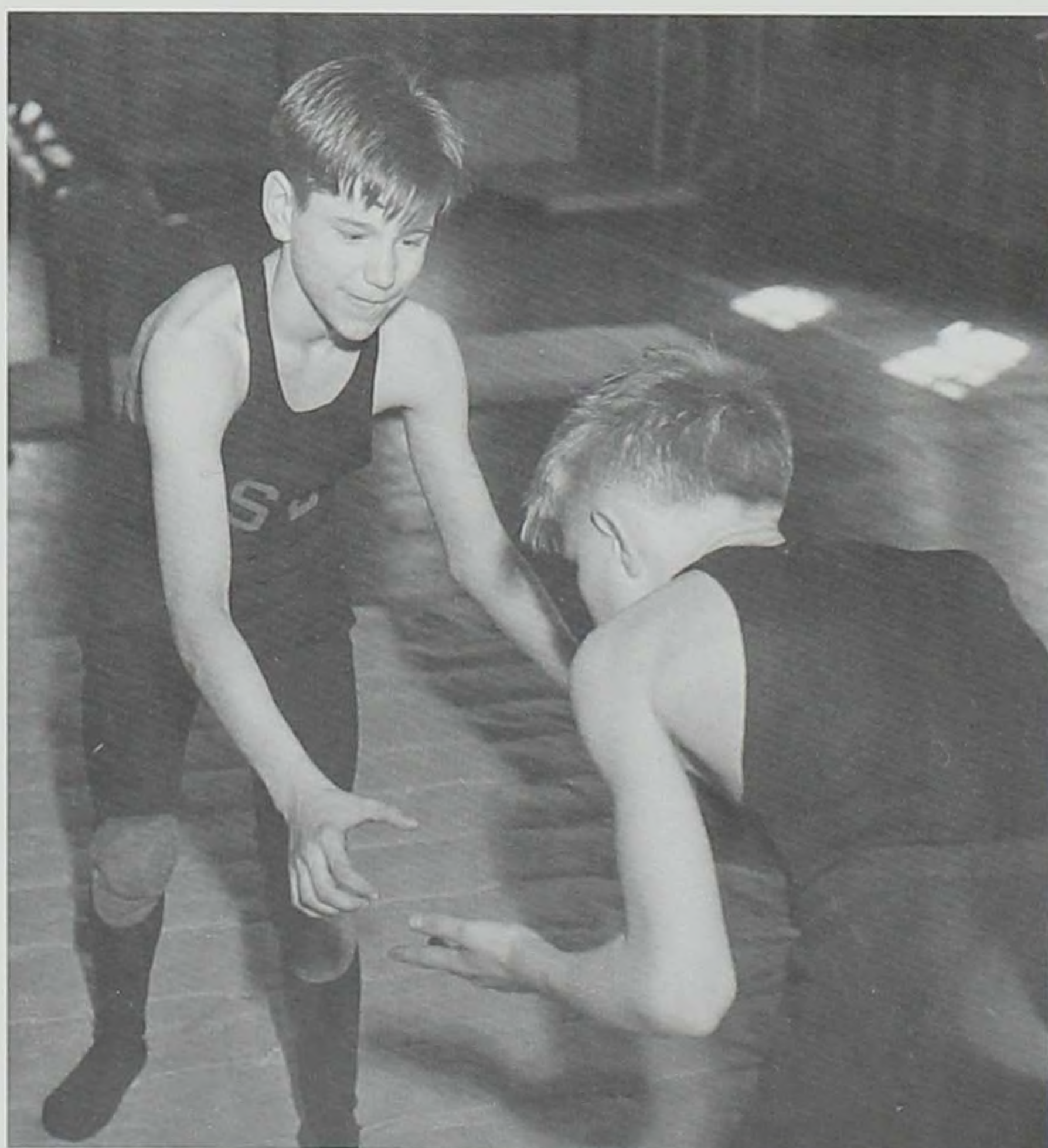
limitations—our account of the tradition of Iowa wrestling leaves out some important figures, as one reader notes of our coverage of great Iowa journalists in our previous issue.

—Ginalie Swaim, editor

Mollenhoff and Mills

The recent *Iowa Heritage* was great! I do have one comment. Missing was George Mills. I was an assistant attorney general of Iowa from 1947 to 1953, and I knew both Mills and Clark Mollenhoff well. I knew no one who would have rated Clark above George—and of course George had a wonderful knowledge of Iowa history. Clark belonged in the issue but not if he was picked over George Mills.

—Earl R. Shostrom, Urbandale, Iowa



Wrestling practice at the School for the Blind, 1939.

Iowa Heritage Illustrated

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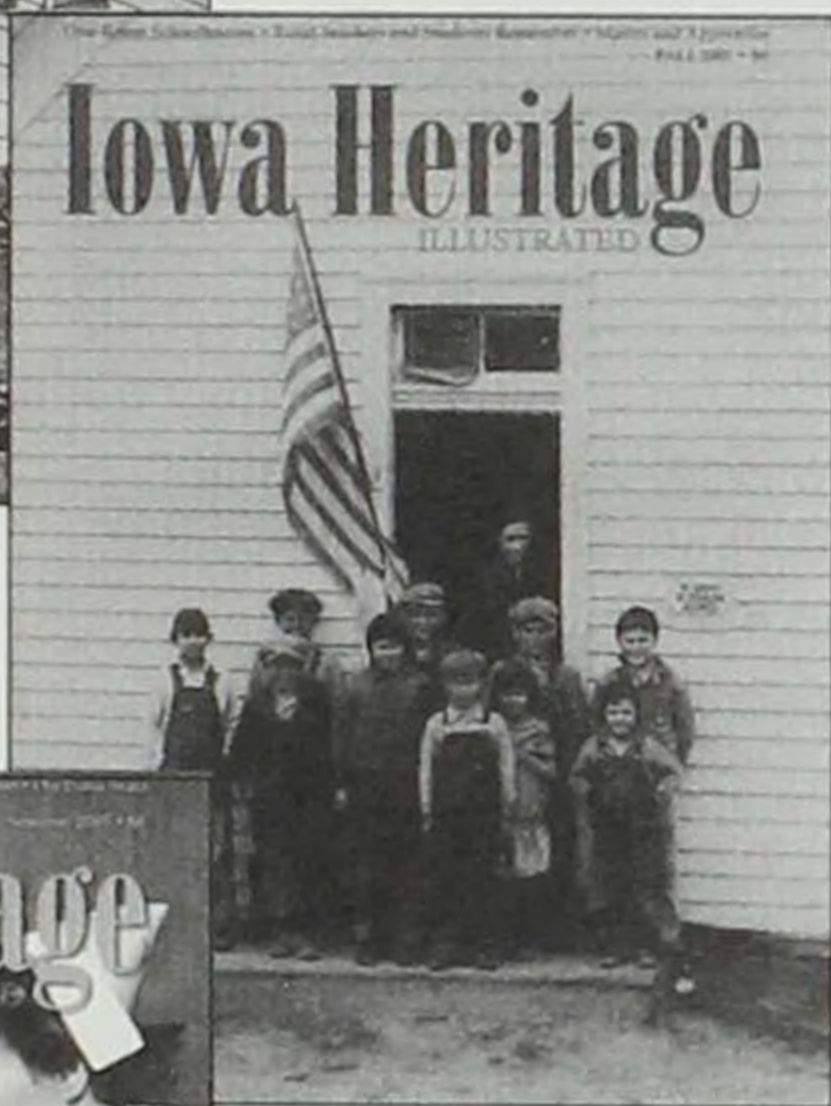
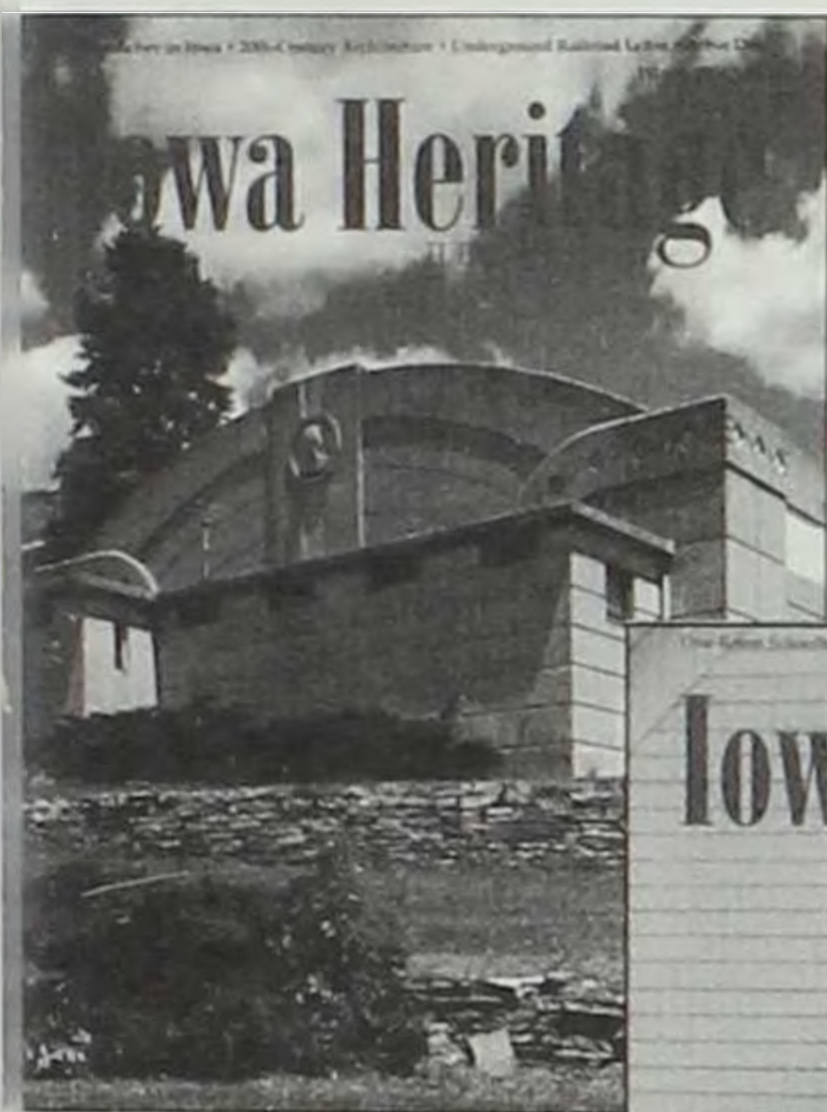
STATE HISTORICAL SOCIETY of IOWA

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Fall 2008, 89:3

Project:
Des Moines Railroad, 1907-1920

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Prologue to a Career in Sound

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Rogers

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Rogers

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Medical Education in Iowa

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red here is Stone Academy
ed by Harker in 2003.

Iowa Heritage

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On the Cover

Iowans who attended one-room schools like this one will recall that the luckiest students in the winter were those seated near the stove and far from drafty windows. In this issue, photographer Michael P. Harker shares his powerful images of one-room schools. Pictured here is Stone Academy near Solon, photographed by Harker in 2003.

Blessed be the interurban

Now and then, most college students yearn
for a world beyond the confines of campus.
A century ago, electric interurban railways were
one way to reach that world.

A poem written in the style of the 23rd
Psalm and published in the 1915 Cornell Col-
lege yearbook lauds the interurban that served
Mount Vernon and the surrounding area.

Running several times a day, the interurban
would drop Cornell students off at “bright
woods and green pastures” for a picnic, deliver
them to Cedar Rapids for a moving picture or
play, or connect them to major railways for
longer trips.

And the price of a ticket on the inter-
urban was just right for students who, as this
poet notes, walked “in the valley of the shadow
of bankruptcy.”

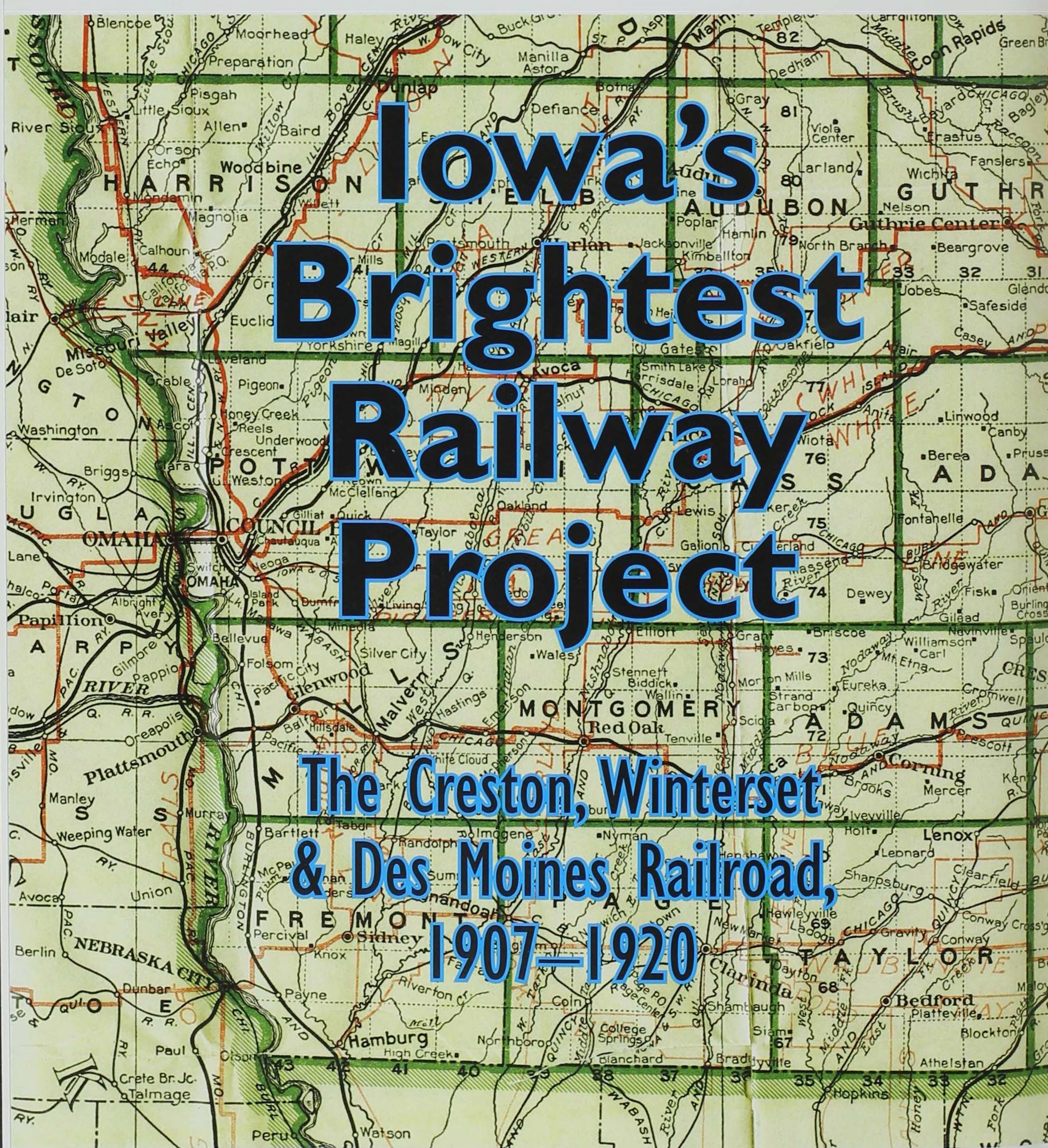
—The Editor

ROYAL PURPLE



1. The interurban is my friend and my helper, I shall not want.
2. It taketh me to bright woods and green pastures, yea also it leadeth me by the still waters of the Cedar. It taketh me to Bertram. It leadeth me to Greene's and the Majestic and I walk the streets of Cedar Rapids because of the righteousness of its works.
3. Yea though I walk in the valley of the shadow of bankruptey and have not kale, yet I fear no evil. For it is with me. It gives me joy, even its rails and ties do comfort me.
4. It preparest time tables for me in the presence of my enemy the North Western. It runneth to suit my convenience; though the North Western be hours late, yet do I make my connections at Marion. Yea every odd hour may I travel.
5. Surely wealth and honor shall come to it all the days of its life. It shall bring students unto Cornell and profit unto its coffers.
6. And it shall be called blessed and its manager, Isaac B. Smith will dwell in the lap of luxury forever.

D. B. L.

A historical map of Iowa, circa 1920, showing county boundaries, major cities, and a network of railway lines. The map is oriented with North at the top. The title "Iowa's Brightest Railway Project" is superimposed in large, bold, blue-outlined letters across the center. Below the title, the subtitle "The Creston, Winterset & Des Moines Railroad, 1907-1920" is also in blue-outlined letters. The map shows the Missouri River along the western border and the Mississippi River along the eastern border. Major cities like Des Moines, Iowa City, and Council Bluffs are visible. The railway lines are depicted as black lines with some red and green highlights. County names like Harrison, Audubon, Guthrie, and Adams are clearly visible.

Iowa's Brightest Railway Project

The Creston, Winterset
& Des Moines Railroad,
1907-1920

CLASON'S GUIDE MAP OF IOWA, CIRCA 1920 (SHSL: IOWA CITY). COPY PHOTO BY CHARLES SCOTT

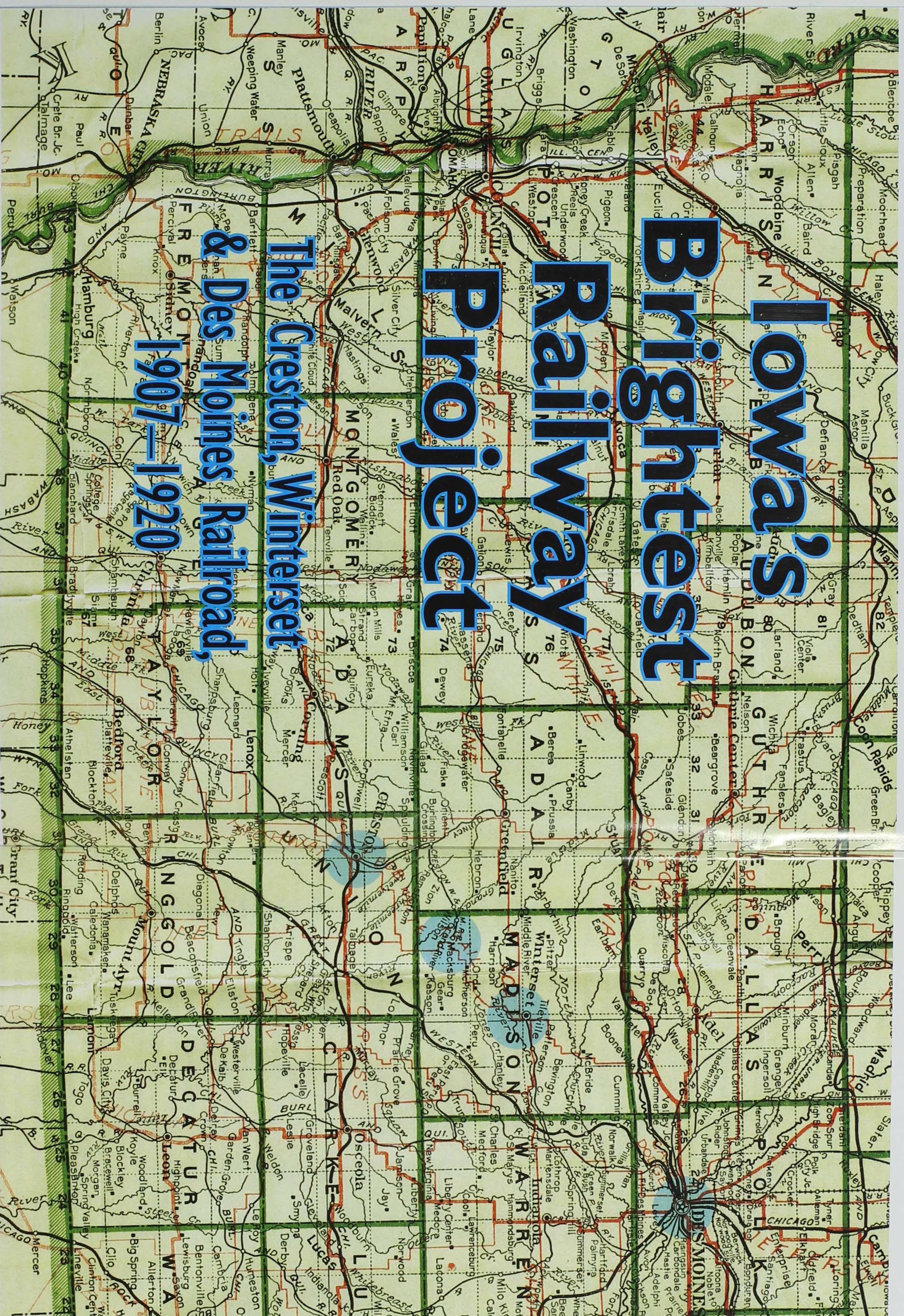
by H. Roger Grant

By 1900 few states could rival Iowa in the density of railroad mileage or, for that matter, total mileage—over 9,000 miles. Said one wag, “Iowa’s railroads cover the state like a heavy morning dew.” Although the map of steam railroads in Iowa had jelled by then, additional railroad schemes periodically appeared until the eve of World War I. As well as a few trunk line extensions and main line relocations, the undertakings in the twilight years of railroad construction included more than a half-dozen shortlines, built where residents believed that new or additional service was vital for their economic well-being. One of these undertakings was the Creston, Winterset & Des Moines Railroad (CW&DM). Its story is a cautionary tale of the challenge of starting up a new railroad at the dawn of the Automobile Age.

The CW&DM was originally intended to be an “interurban.” Electric railways offered multiple benefits. One observer in 1903 called them “the latest harbingers of a higher state of civilization.” Travel on interurbans was clean without the annoyance of smoke, cinders, and soot. Cars usually ran more frequently than their steam counterparts and at speeds as good, or better, than steam roads provided on branch and secondary lines. Passengers liked that interurbans stopped almost everywhere—even at tiny villages and farmsteads—and fares were commonly less

Plans to build a railway connecting Creston and Winterset to Des Moines were backed by community leaders in the village of Macksburg, which lay midway between the two county seats. (Four blue dots added for clarity.)





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Plans to build a railway connecting Creston and Winterset to Des Moines were backed by community leaders in the village of Macksburg, which lay midway between the two county seats. (Four blue dots added for clarity.)

than rates charged by steam carriers. There were also perceived advantages for managers and investors, including the possibilities of selling excess electricity to commercial and residential customers.

The nation experienced two great bursts of interurban electric railway construction, 1899–1903 and 1905–1908. Although Iowa's interurban trackage was less than 500 miles in 1910, the number of passengers exceeded seven million. In Iowa most interurbans ran north and south, interchanging with major steam lines that ran east and west. By 1907, Des Moines had electric interurbans operating to the east, north, and northwest. But connections to the southwest were nonexistent.

Movers and shakers in counties directly southwest of Des Moines started pushing in 1907 for a 65-mile interurban. Besides serving Des Moines, the line would connect two county seats—Creston in Union County, and Winterset in Madison County—and small towns along the way. Arguments for its feasibility seemed convincing. Success at finding the money, however, would take five years.

A Creston civic leader made the case that a railroad was needed. He stated that the "total tributary population" of 116,000 produced 250,000 tons of crops, livestock, and other commodities that were "available for haul, either long or short." Although the CW&DM was estimated to cost \$1.8 million [over \$37.5 million in today's dollars], the *Creston Advertiser-Gazette* claimed already in August 1907 that "we have . . . deeds and contracts over eighty per cent of the right of way already secured." In addition, Creston, Winterset, and Macksburg had awarded franchises, allowing the railroad to operate in the towns. "This road, when constructed will be one of the biggest payers in this section of the country. . . . People of this vicinity have hitherto patronized Omaha and St. Joe and other points south in preference to coming to Des Moines."

Enthusiasm was particularly strong in and about the village of Macksburg, halfway between Creston and Winterset. "Some of the people around Macksburg are very much elated over the prospects of the interurban railroad," noted the Macksburg reporter for the *Winterset Madisonian* in January 1908. "They know personally of the benefits the people have in sections where there are trolley lines." Added this writer, "Liberal subscriptions [pledges and contributions] are being offered. . . . A railroad through this section will benefit every farmer within five miles of the line, to the extent of one dollar per acre every year for the next twenty years."

If the road were to be more than a "hot-air" proposition, major financial support was mandatory. Backers took heart in February when the press revealed that F. M. Hubbell, a prominent Des Moines businessman who controlled the profitable Des Moines Union Railway, indicated that he would pledge to invest \$5,000, and that members of the Des Moines Commercial Club expected to raise \$250,000. Winterset interests agreed to buy \$30,000 worth of securities, and Creston's commitments would be "substantial." "PROGRESS, ADVANCEMENT, MODERNISM" became the slogan. According to the press, Leslie M. Shaw, former Iowa governor and U.S. Secretary of the Treasury in the Theodore Roosevelt administration, endorsed the project, and Parkersburg "capitalist" C. C. Wolf planned to commit \$60,000. Newspaper readers in Union and Madison counties surely expected "dirt to fly" momentarily.

But efforts to sell construction bonds of the still unincorporated enterprise were failing. A recent state law, the Peterson Act, designed to tighten the sale of securities, deterred investors. Moreover, the fall-out from the Panic of 1907 made bonding houses more cautious. Creston attorney Richard Brown believed that these two factors "will necessitate a much larger amount of money being subscribed by the people locally than was previously asked for."

CW&DM backers now rethought their construction strategy, "seriously considering the road in sections, either building from Des Moines to Winterset, or from Creston to Macksburg," explained the *Creston Semi-Weekly Advertiser*, "the plan being to complete the road in two or three years." Individuals who had already subscribed to stock would need to agree to this new arrangement since the original proposition had called for building the entire road at one time.

News worsened. "The Creston Road Is Abandoned," announced the *Des Moines Capital* in March. Even though "the project was practicable," the financial obstacles were huge. Subscriptions had lagged, and franchises in Creston, Macksburg, and Winterset were about to expire. Some doubted they could be easily renewed.

Supporters reemphasized that "this road is owned and controlled by your own neighbors and fellow citizens who are . . . determined to build the road. All they need is the continued loyal support of those who have befriended the undertaking in the past. We have not been talking much noise, but we have been quietly and persistently at work." By July, Judd & Ross, a Chicago-based firm that had financed and built several interurbans and steam shortlines (including the recently completed ten-mile Albia Interurban Railway), had agreed to participate. "A survey gang will be put

to work soon to complete the survey commenced and well progressed about a year ago and as the facilities of the Judd & Ross Company will permit construction work."

Unfortunately, Des Moines interests had by now retreated. Instead, local supporters would lead the project: Robert Brown of Creston as president; Jerry Wilson, Macksburg, first vice president; and M. E. Harris, Winterset, second vice president. "The new organization has nothing to do with the old organization, which has been wholly abandoned." Plans had changed as well. A Des Moines destination was no longer an immediate objective, and construction would be in two stages: first, between Creston and Macksburg, and later, between Macksburg and Winterset. Perhaps most newsworthy was the announcement that the CW&DM would be a conventional steam rather than an electric road. Even if constructed to the cheapest standards, an electric interurban involved not only rails on a graded right-of-way or alongside a public road, but also an overhead and pole line stretching over the entire route, electrical substations, and a source of electricity, supplied either by existing power companies or from the railroad's own generating plant. A steam road, though, could be built inexpensively, perhaps for as little as \$6,000 per mile. Used locomotives and cars could be bought at reasonable prices.

The local press kept pressure on the citizens. "Nearly every farmer [who will be] benefitted by the road has agreed to subscribe to stock." Stock solicitors were now seeking investors in adjoining townships along the route. In nearby counties, the press remarked that another shortline, the Atlantic Northern & Southern Railroad, had been "entirely paid for by farmers and business men in towns and country along the route." But it was a full two years before the CW&DM backers filed articles of incorporation with the Iowa secretary of state. Authorized with a capital stock of \$500,000, the company finally had the right to operate "in whole or in part by steam, electricity, gasoline, or any other motive power which may be adopted by [the] board of directors." In the next month, October 1911, voters in two townships along the route overwhelmingly approved a 5 percent property tax increase. Surely a combination of stock subscriptions and tax monies would make bonds at-

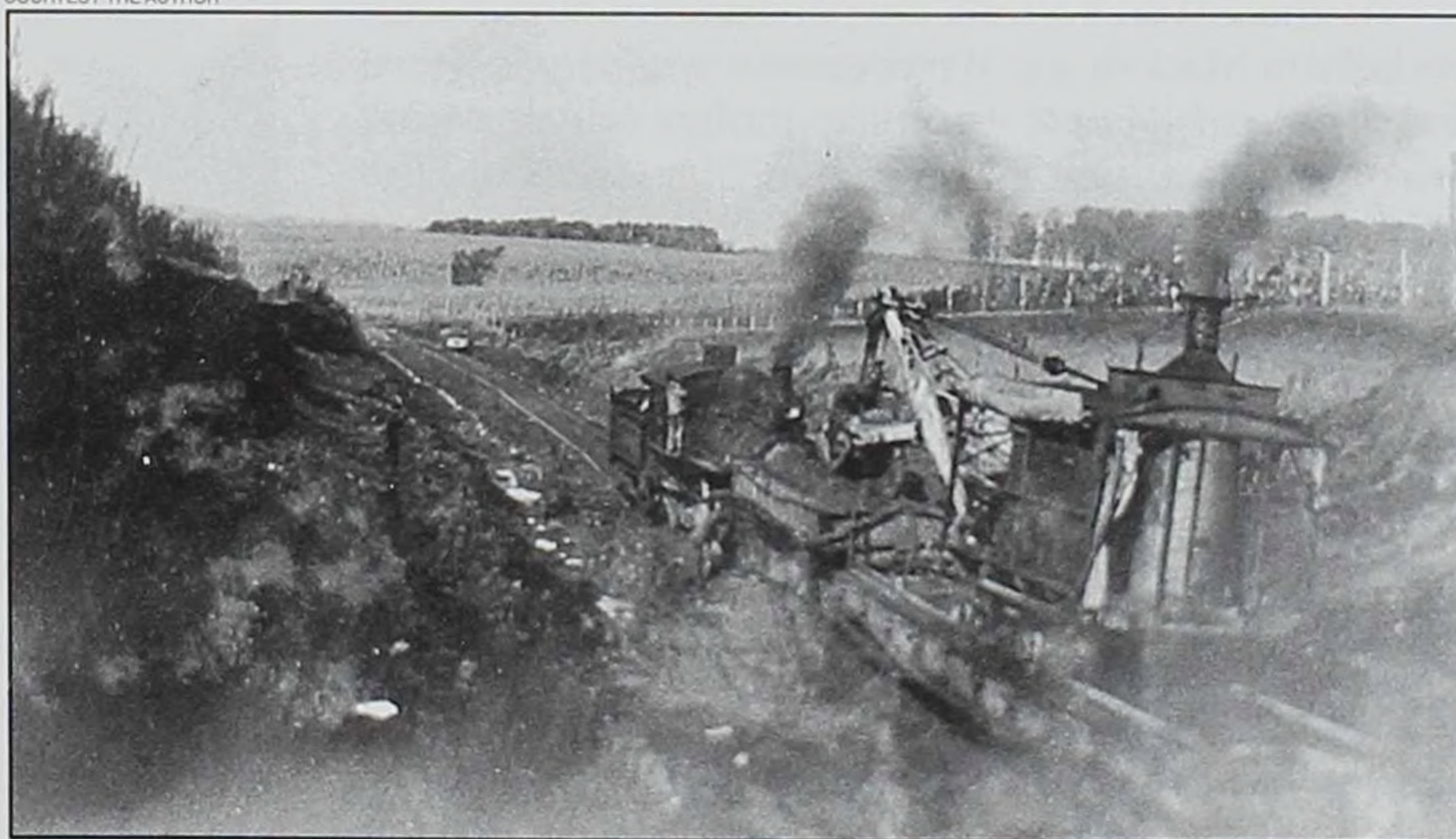
tractive to investment houses, thus completing the financing.

The new year began with news that "Macksburg is about to get a railroad—a hope deferred from time to time during the past forty years." In the time-honored spirit of boosterism, the *Madisonian* added that "if the road is built [from Creston] to Macksburg, it is certain to be built on to Winterset and Des Moines."

But all was not certain. The Chicago, Rock Island & Pacific Railroad ("Rock Island"), like the Chicago, Burlington & Quincy ("Burlington"), did not want the CW&DM built, for fear they would lose "a valuable slice of territory." These railroads pressured bonding houses in New York and Chicago to avoid CW&DM bond offerings. Until bonds were sold, stock subscriptions were out of reach.

Shifting their target to mostly Iowans, the CW&DM formed a subsidiary firm, the Iowa Bond and Security

COURTESY THE AUTHOR



A thorn in the side of the CW&DM was the need for a deep cut immediately west of Macksburg. A local photographer captured one of the railroad's two American Standard-type locomotives working with the company-owned steam shovel in 1913, probably several months after the line opened officially.

Company, that marketed the 6 percent gold first-mortgage securities. Some prospective investors were skeptical; several Iowa steam shortlines and interurbans were experiencing financial reversals. But eventually, with \$135,000 raised from stock and taxes, and \$144,000 generated from bonds, the CW&DM let the construction contract in August 1912.

To qualify for the tax monies, though, the railroad had to be completed by the stroke of midnight on December 31, 1912. This was a daunting task, especially since the territory to be spanned was hardly flat as a floor, necessitating considerable earthwork and one huge cut. Quickly, the 21-mile route between Creston and Macksburg turned into a construction zone. Steam traction engines and earth-moving equipment shaped the right-of-way. Laborers unloaded rails, ties, and other track materials in Creston, Orient, and Spaulding. Carpenters built three wooden-deck bridges, including a substantial span over the meandering Grand River. Graders faced an especially steep ascent coming out of the river valley; reported to be a 5 percent incline, it would perhaps be the steepest piece of trackage in Iowa. A massive clay ridge also lay immediately west of Macksburg. Contractor C. B. Judd traveled to Chicago to acquire used rolling stock. He found two American Standard (4-4-0) steam locomotives, a large steam shovel, and several cars for hauling dirt—all essential for work on the difficult terrain near Macksburg. He also acquired a passenger coach and a few freight cars.

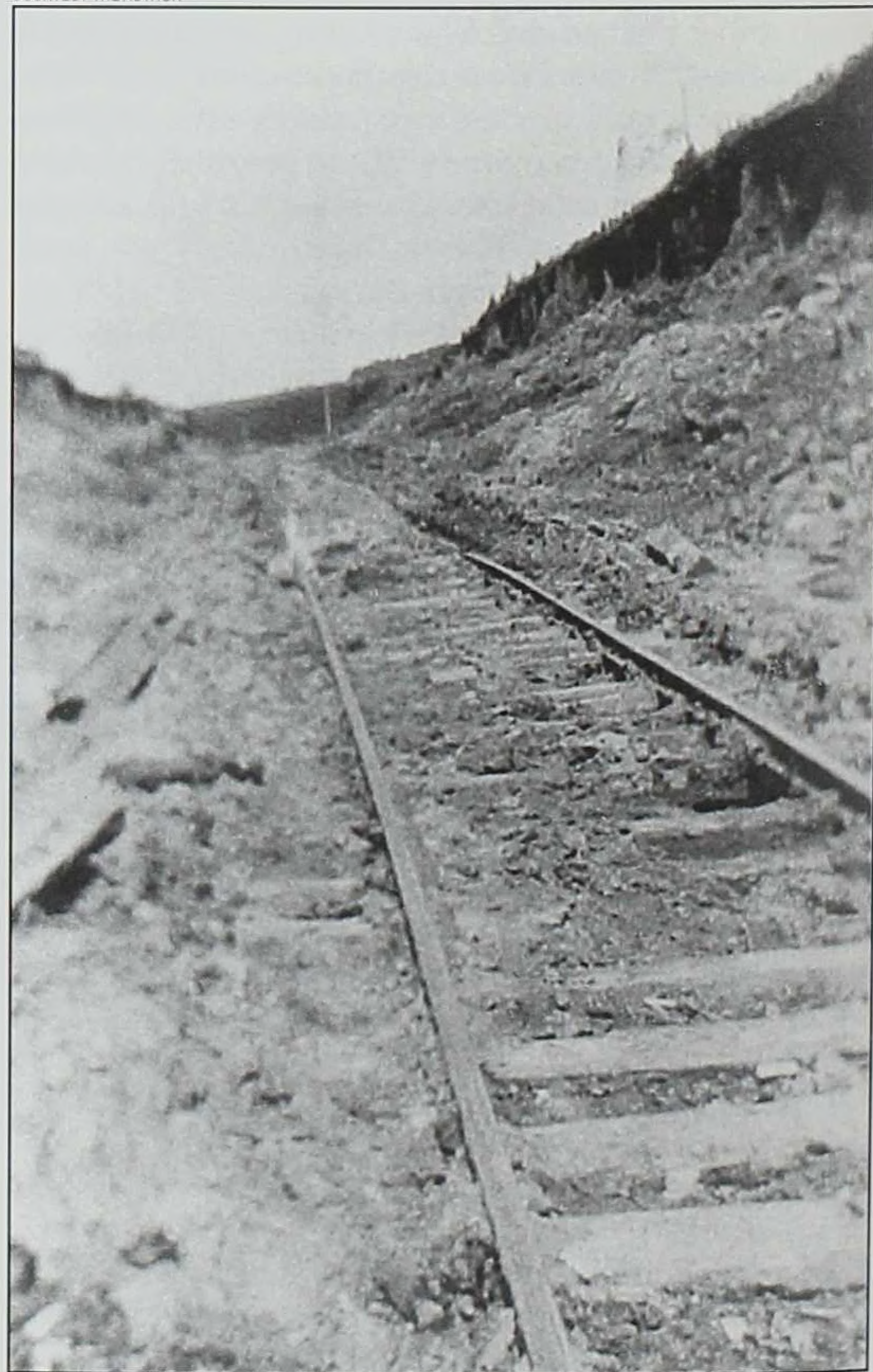
As the CW&DM took shape, excitement grew, especially in Macksburg. Well before townspeople heard the shrill whistle of a steam locomotive (albeit a used one), they read ecstatic promises of prosperity. The local press described Macksburg (population 197 in 1910) as "the farthest from competition of any town in the state, being thirteen miles from Lorimor, seventeen miles from Winterset, twenty miles from Creston, and twenty-two miles from Greenfield. . . . In consequence of this large territory, and being located in the richest farming district in Iowa, it is safe to say that it will be a town of several thousand within the next two years." E. G. Barker, who owned 160 acres adjoining Macksburg, vigorously promoted the sale of 150 lots at a public auction scheduled for mid-November. The Fullerton Lumber Company, which operated a chain of yards in western Iowa, also entered local land transactions. "With three lumber yards," a Macksburg citizen commented, "it looks as if one could certainly get lumber at the right price."

Workers—sometimes numbering 200 in day and night shifts—pushed the steel rails forward, aided by "splendid weather." By December 20, the track-laying gang was five miles from West Macksburg, technically within the town's corporation limits. The last few miles were built to the barest standards—no grading was done and only the surface soil was removed before laying the track. Helped by this drastic shortcut, the first train arrived at the hastily installed West Macks-

burg siding at 4:30 p.m. on New Year's Eve. There was no driving of a golden spike or celebrating by a local crowd—only relief that after five long years, rails had finally reached greater Macksburg.

On January 4, 1913, CW&DM directors and others proudly rode the first passenger train from Macksburg to Creston. And after a favorable inspection by an examiner for the Iowa Board of Railroad Commissioners, the CW&DM became a bona fide common carrier. By June 30 the company had spent \$235,000 on its physical plant and rolling stock, or approximately \$11,000 per mile, somewhat less than an average contemporary shortline in the Midwest.

COURTESY THE AUTHOR



By mid-1913 track-layers had installed the ties and rails through the West Macksburg cut. Most of the steel used on the CW&DM weighed either 60-pound or 65-pound to the yard, typical of rail selected for shortlines in the Midwest.



The Creston, Winterset & Des Moines was never built as far as Winterset or Des Moines, but rather ended at Macksburg. (Tracks have been added to this map to indicate the final route.)

The CW&DM ran two daily "mixed" trains (freight cars with an attached coach for mail, express, and passengers) between Creston and Macksburg. Passengers expecting the 21 miles to fly by were surely disappointed. The trip took two hours, with stops along the way at Spaulding, Burlington Crossing, Ramsbottom, Zion, and Wilson. Speeds averaged about ten miles per hour. What a Creston journalist had proclaimed as "Iowa's brightest railway project" was hardly a showcase for modern railroad technology. The final mile into Macksburg was still not finished, nor was the town's depot, turntable, and engine house. Not long after the Creston depot was finished, fire—fueled by barrels of oil stored inside—reduced the wooden structure to ashes.

If there was a grand opening of the CW&DM, it took place a few weeks after the fire. Commercial interests in Macksburg undoubtedly wished to show that their community was full of "live wires." At their invitation, Creston's Boosters' Club, Business Men's Club, and Concert Band made a special trip over the CW&DM. Passenger coaches were packed; one was reserved for "the ladies." Perhaps sponsors anticipated a raucous group of males.

Almost immediately, the CW&DM became the transportation artery for Macksburg and the surrounding countryside. Cattle and hogs, destined for Swift & Company in Creston and packing plants elsewhere,

moved over the somewhat rickety tracks. Inbound shipments brought lumber and cement, hardware and farm machinery. The figures for total volume carried are not known, but the railroad probably handled 300 to 400 cars during its first year of operation.

Eventually several grain elevators and lumber yards appeared at trackside in Macksburg. Livestock pens were built in Macksburg, Zion, and other designated stations en route to Creston. While the company's steam shovel scoured out the big cut at West Macksburg, crews tamped the ballast (mostly dirt rather than gravel) and attended to other maintenance associated with a freshly graded right-of-way. Not only was the railroad burdened with the steep ascent east of the Grand River, it also had to deal with the not-so-friendly Burlington, its only interchange partner. The company forced the CW&DM to maintain the expensive crossover near Spaulding. More troubling were rate divisions on freight traffic. The Burlington refused to grant the shortline a favorable percentage of receipts derived from these inter-line movements. Residents blamed the Burlington's "lack of good will" for the shortline's growing financial woes. The carrier lacked any real bargaining power, and the only recourse was to file complaints with the Iowa Board of Railroad Commissioners and the Interstate Commerce Commission.

Discussion had resumed about extending the tracks 17 miles to Winterset. The hilly terrain would

be expensive to cross, but backers thought that shipping commercial rock outside Winterset alone justified expansion. Even though the Rock Island monopolized that traffic and would resist competition, rate divisions with the Burlington and Rock Island might become more attractive if a second outlet could be established. This had been the case for several other recently opened shortlines in Iowa. But the balance sheet damped down any immediate expansion. For the first six months of 1913, net operating revenues amounted to a paltry \$513.11.

With prospects gloomy, the company decided to seek court protection from creditors. "The line has been in operation under many vicissitudes practically all its life," a local chronicler wrote. On June 25, 1914, longtime backer Clarence Wilson of Macksburg became the receiver and general manager. Hopeful that he could reorganize the company, he raised additional funds from stockholders, sold several pieces of equipment, and improved the road. Track workers attended to soft spots that plagued the line during wet weather and re-

But it operated only on Tuesdays, Thursdays, and Fridays. On Mondays, Wednesdays, and Saturdays, the poky mixed train, which handled the more lucrative freight shipments, made a single round trip between Creston and Macksburg.

But losses continued. A staggering net deficit of \$16,000 for 1914 faced the company. Yet it hardly squandered money. Sixty percent of expenditures involved payroll, but when compared to larger roads, wages for the 31 employees were extremely low. The 20 trackmen averaged \$166 per year, and the three section foremen earned \$220. Trimming the workforce did not help. On July 1, 1916, the company shut down.

Backers and patrons were not about to lose their railroad. Boosterism remained strong, reinforced by the launching that summer of the *Macksburg Independent* under editor Charles Saiser. Although area entrepreneurs had established an "Auto Passenger and Freight Service to and from Macksburg and All Neighboring Points," the local citizenry didn't consider it a substitute for a freight-carrying railroad. In early September, about 50 men gathered at the home of CW&DM receiver Clarence Wilson and voted unanimously to push for solicitations to reopen the road. At least \$18,000 was needed. By late September, all but \$1,600 had been raised. "There are men, men of ample means who ought to be interested in this project to take care [of] all that is yet needed," chastised Saiser's *Independent*. "But there are some folks who are always willing to go coasting if some one else will pull the sled to the top of the hill. Yes, they are even willing to ride up the hill."

Within weeks, however, Saiser rejoiced: "STOP—LOOK OUT FOR THE CARS!" The funds had been raised and "train service will be established just as rapidly as the track and equipment will warrant." He continued to agitate for a connection with either the Great Western, whose Des Moines/Kansas City artery ran east of Macksburg, or the Rock Island and to have, within at least three years "a line of railroad through Macksburg that will be worthy of the name and a credit to all."

Keeping the CW&DM alive remained a largely com-

PROVIDED BY AUTHOR: RALPH BREAKENRIDGE COLLECTION



Several laborers take time to accommodate a photographer while they complete a cement floor for a storage building near the Fullerton Lumber Company yard in Macksburg. A boxcar immediately adjoins the construction site.

placed rotten ties with ties treated with creosote. In a creative move to supplement mail and passenger service, the company acquired a "motor car." This piece of equipment is a mystery, but perhaps it was a small gasoline-powered chain-drive vehicle. At least on paper, the twice-daily motor car offered superior service over the mixed trains; according to the schedule, it averaged speeds nearly two times as fast as earlier runs.

munity affair in Macksburg. "Last Friday morning a hurry call was sent out for help to get the C. W. & D. M. track repaired some so that the old 7 spot might be taken to Creston for some repairs," Saiser reported in early November. "A number of our town folks responded and by night the track was in shape so that early Saturday morning the engine was started out. Owing to dirt covered crossings and pasture fences across the track, it was not until about five o'clock that Creston was reached."


Although officially reborn on December 1, 1916, the CW&DM remained in receivership and now provided only freight service. Expenses for 1917 were twice as high as revenues. Although America's entry into the Great War increased the need for railroads, the CW&DM continued to hemorrhage red ink. The district judge who had overseen the bankruptcy in 1914 now warned the receiver that "the road must not cause any more indebtedness" and that it "had better sell to the highest bidder." A sale made sense; war-time conditions had escalated scrap metal prices. But in the end the judge bowed to the receiver's commitment of additional money to replace 3,000 rotted ties and to repair No. 7, the remaining locomotive. The *Independent* called the commitment "courageous loyalty."

The little railroad limped along, its ups and downs noted in the Macksburg *Independent*. "The CW&DM experienced a delay in traffic this week due to a derailment last Wednesday, which tied up the services until Wednesday of this week," reported the newspaper in one issue. "After working until night to get the cars back on the rails, the crew started for Creston and after a few miles travel the tender became derailed. Altogether the track repairs and putting the rolling stock on track again used up the major portion of the week." To haul grain, livestock, and much-needed coal during wartime rationing, the railroad occasionally borrowed a locomotive from the Burlington.

The tangled saga of the CW&DM was approaching its end. In November 1918, the receiver, with court approval, sold the mortgage for \$30,000 to Ralph Beaton and Sigmund Ornstine, junk dealers from Columbus, Ohio. They, in turn, quickly peddled the track and rolling stock to Harris and Greenberg of Chicago, another

salvage firm. In early December junkers began lifting the rails in Macksburg.

Former CW&DM president Robert Brown brought suit in district court to restrain Harris and Greenberg from dismantling the line. He argued that the property could be operated at a profit; that stockholders, including taxpayers, had not been fairly compensated for their investments; and that the line had not been legally



1918

Mrs. F. A. Bonham
Moines shoppers Tues-

rg is experiencing a
amine this week none

of my ability, I depend on the prompt payment of accounts due me for the settlement of my own bills. I, therefore, solicit your early attention to your account due me. Dr. Wallace. adv.

Goblin Soap for toilet and bath Shell's.

Red Cheeked apples at Herren's Grocery. adv.

WOOD FOR SALE!
RAILROAD TIES CHEAP
C.W.&DM.RR
SEF Mr. C. LAMM
at the DEPOT.

1918 has not been paid
people need their money
we need ours.
TRENT & BL

Extracts all sizes—at

Ball Brand, Wool, Arr
at Love's.

Shampoo with Canthrox

Foley's Cough Syrup, s

Get the Genuine
and Avoid
Waste
MORGAN'S
SAPOL
SCOURING S
In Every

Along with shoes, soap, and apples, used railroad ties from the CW&DM were advertised in a local newspaper.

abandoned. By the time the judge issued a restraining order, about six miles of track had been removed. The heaviest steel rails went to Japan. The used ties were offered to area residents.

The legal battle raged into 1920, summarized by *Des Moines Sunday Register*: "The state of Iowa [in 1919] started mandamus proceedings on complaint of various parties. Later the attorney general of the state joined the plaintiffs. Various applications to various judges were made. Some were granted; others were denied. Finally the attorney general secured a restraining order and a trial was held. The state was beaten, but on Jan. 20, 1920, it appealed the case."

By summer the legal wrangling stopped. The Iowa Supreme Court allowed the track dismantling to proceed.

A decade or two earlier, speculation about railroad building and line revitalization might have been reasonable. But by now, automobiles were replacing trains. Sales of new and used autos rose, commercial truckers transported freight, and roads steadily improved. In 1911 Ed Smith, editor of the *Madisonian*, had already sensed the revolution. "Will the motor car replace the passenger coach as a means of travel?" he asked. "If one had put this question ten years ago, his sanity might have been questioned. Today there is enough of argument in favor of the motor car to make the question a live one and there is no doubt but that the automobile has already cut deeply into the passenger receipts of the railroad companies." Smith added, "Dirt auto roads are being built and kept in good condition between the principal cities of Iowa and surrounding states. With the auto perfected and the highways further improved, the use of motor cars may soon become the ordinary mode of travel."

Those who had championed the CW&DM for 13 years had failed to grasp economic realities. It had always been a woebegone operation. In 1915, a local writer granted that "Macksburg has a railroad," but added, "Whether it always will have one or not is, as Rudyard Kipling says, another story." The shortline never connected to Winterset, and neither rebuilding nor extending it made sense. If there had been enough business in Macksburg and Zion, the Burlington would have acquired the several miles from near Spaulding to maintain service. The neighboring Great Western focused on main stems and hardly wanted to build and buy what would never become more than a minor appendage, even if it siphoned some freight traffic away from the Burlington in Creston. There was no reason for the Rock Island to buy the remains of the CW&DM

and build connecting trackage. These three trunk carriers faced their own major problems, highlighted by adjustments to the end of federal wartime controls.

Sentimentality, as well as boosterism, seemed to have kept hope alive for the 21-mile line. On a March day in 1918, Saiser reported bittersweetly that "a joyful sound was heard here this morning. It was the simple toot, toot of the old 7 spot pulling out for Creston." Even after the junk dealers had bought the mortgage, Saiser decreed, "We are not ready to give up." "Cheer up! Every cloud has a rainbow." Many villagers and farmers showed a genuine love of their railroad, affectionately nicknaming the CW&DM the "Crazy Willie & Dandy Molly." The *Independent* was still pleading in 1920: "Do Your Best to Get Our Little Willie Home Again."

Macksburg survived the dismemberment of the CW&DM. About the same time, the *Independent* folded and a lumber yard and the oldest mercantile store closed, but other local businesses continued. The population never skyrocketed from 200 to "several thousand" as predicted in 1912, but for decades the population held steady.

In recent years the town lost most retailing and service activities to businesses in Creston and Winterset. Its population hovers at 100. Although the CW&DM has been abandoned for nearly 90 years, those with sharp eyes can spot the old brick-lined well near the Wilson station and some rotting bridge supports. A cement sidewalk still leads to the depot site in Macksburg, and portions of the grade are visible across pasture land. Only a few traces exist of what was once considered "Iowa brightest railway project." ♦

NOTE ON SOURCES

Important sources for this article include town and county histories and atlases; newspapers for Creston, Des Moines, Macksburg, and Winterset; and the author's interviews with Georgena Breakenridge and Ralph Breakenridge, Macksburg, Iowa, August 24, 2007. Broader sources include *A Chronology of American Railroads* (Washington, DC: Association of American Railroads, 1957); H. Roger Grant, "Electric Traction Promotion in the South Iowa Coalfields," *Palimpsest* 58 (January/February 1977); H. Roger Grant, ed., *Iowa Railroads: The Essays of Frank P. Donovan, Jr.* (Iowa City: University of Iowa Press, 2000); H. Roger Grant, *The Corn Belt Route: A History of the Chicago Great Western Railroad Company* (DeKalb, IL: Northern Illinois University Press, 1965); George W. Hilton and John F. Due, *The Electric Interurban Railways in America* (Stanford, CA: Stanford University Press, 1960); William Edward Hayes, *Iron Road to Empire* (New York: Simmons-Boardman, 1953); Don L. Hofsommer, *Steel Trails of Hawkeyeland: Iowa's Railroad Experience* (Bloomington: Indiana University Press, 2005); William D. Middleton, *The Interurban Era* (Milwaukee: Kalmbach, 1961); *The Official Guide of the Railways* (June 1914); *Poor's Manual of Railroads, 1918* (New York: American Banknote Company, 1918); Richard C. Overton, *Burlington Route: A History of the Burlington Lines* (New York: Knopf, 1965); William H. Thompson, *Transportation in Iowa: A Historical Survey* (Ames: Iowa Department of Transportation, 1989); Peter Weller and Charles Franzen, *Remembering the Southern Iowa Railway* (Washington, IA: P. Weller and C. Franzen, 1992); and Ben Hur Wilson, "Abandoned Railroads in Iowa," *Iowa Journal of History and Politics* 26:1 (January 1928).

Official reports include the annual reports of the Iowa Board of Railroad Commissioners for 1913, 1915, and 1918; *Annual Report of the Creston, Winterset & Des Moines R. R. Co. to the Interstate Commerce Commission of the United States for the Year Ended June 30, 1915*, 1, Interstate Commerce Commission Records, Record Group 134, National Archives and Records Administration (College Park, MD); and [Map] *Board of [Iowa] Railroad Commissioners* (Chicago, 1915).

Annotations to the original version of this article are housed in Iowa Heritage Illustrated production files at the State Historical Society of Iowa (Iowa City).



For decades, remnants of the abandoned railroad remained. In 1962 bridge supports (or bents) could be seen near the former station at Wilson. Traces of the abandoned grade also were easily recognizable.

Author H. Roger Grant, a native of Albia, Iowa, is the Kathryn and Calhoun Lemon Professor of History at Clemson University in South Carolina. He is the author or editor of 26 books, most of them on railroad history.



BOTH PHOTOS COURTESY THE AUTHOR

Schools Left Behind

by Michael P. Harker

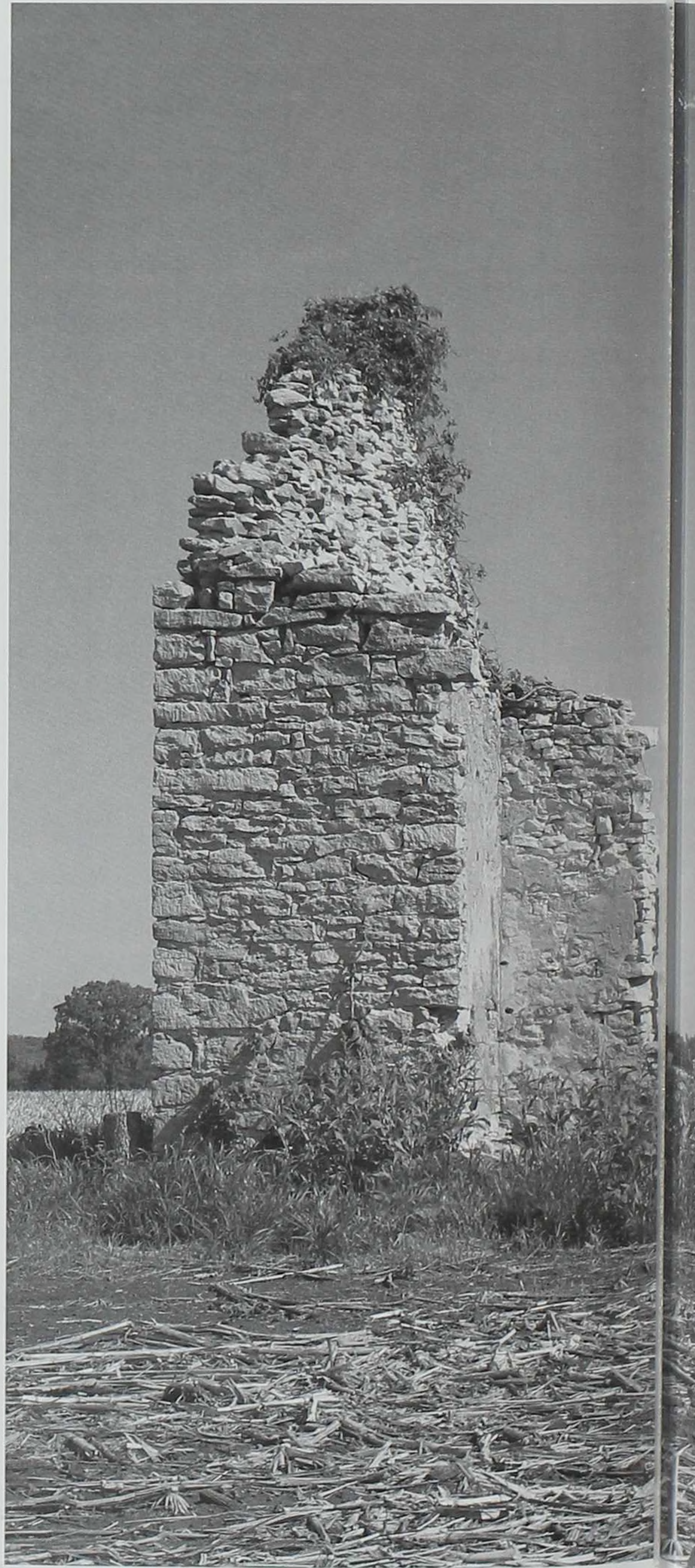
I had been working on my project of photographing one-room schoolhouses for about a year when I heard about the remains of a limestone school on Highway 61 somewhere north of Mediapolis.

I was in Davenport at the time, and, as always, I had my camera with me. Mediapolis is south of Muscatine and the drive from Davenport took me over an hour.

I actually drove past the limestone structure before I realized it was the school. There had been a snowfall a couple of days before, but most of the snow had melted already. The light was perfect that morning and the snow in the cornfield helped provide some fill light in the shadows. This is my favorite image from the schoolhouse project because it reminds me of an old Roman ruin.

Of the dozens of Iowa schools that I photographed over three years and 25,000 miles, here are a few of my favorites. Although many no longer look as they did in their glory days, the photos are silent witnesses of their role in Iowa's past.

Right: Ruins in a field, Mediapolis, 2004





Schools Left Behind

by Michael D. Stankiewicz

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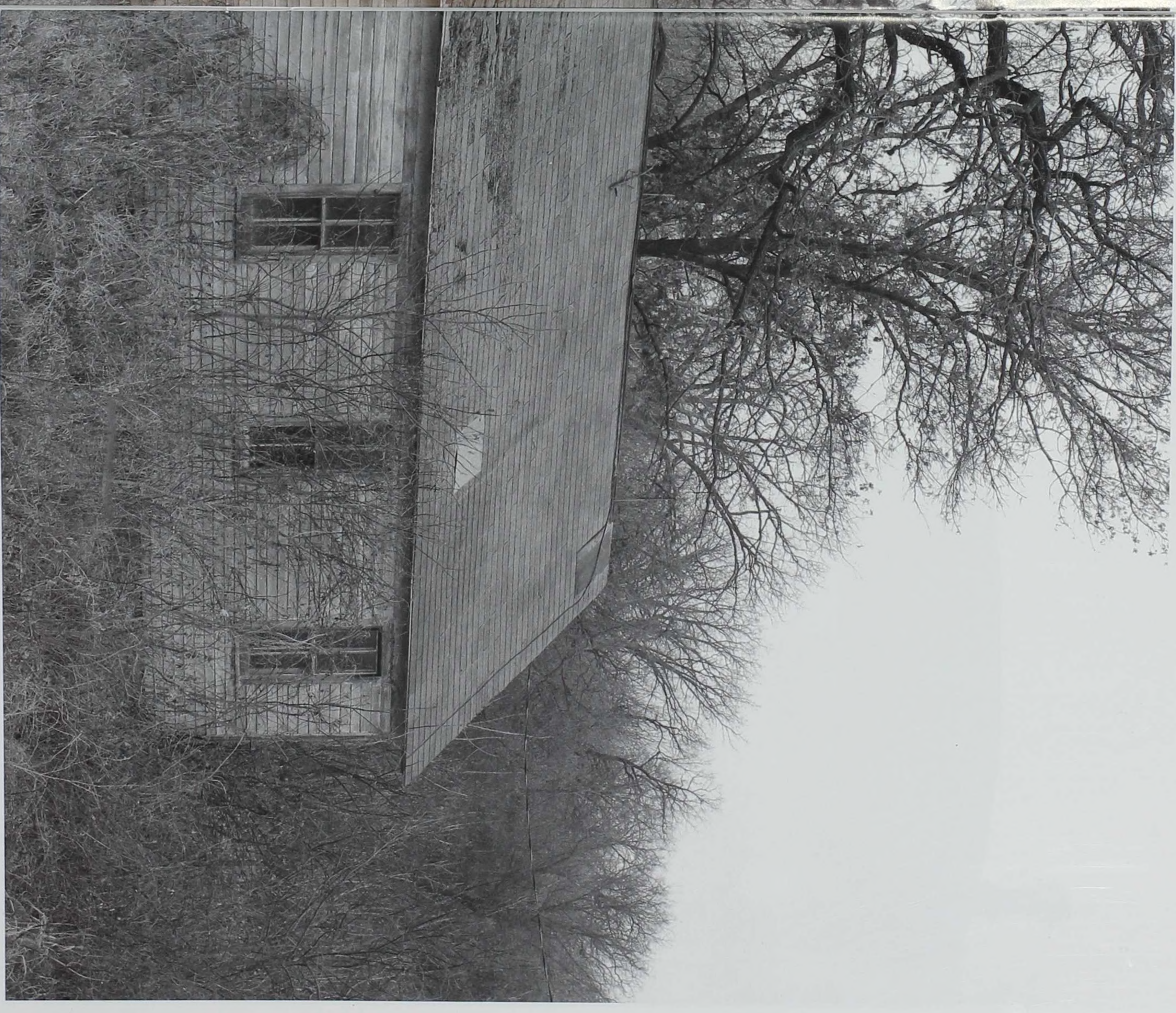
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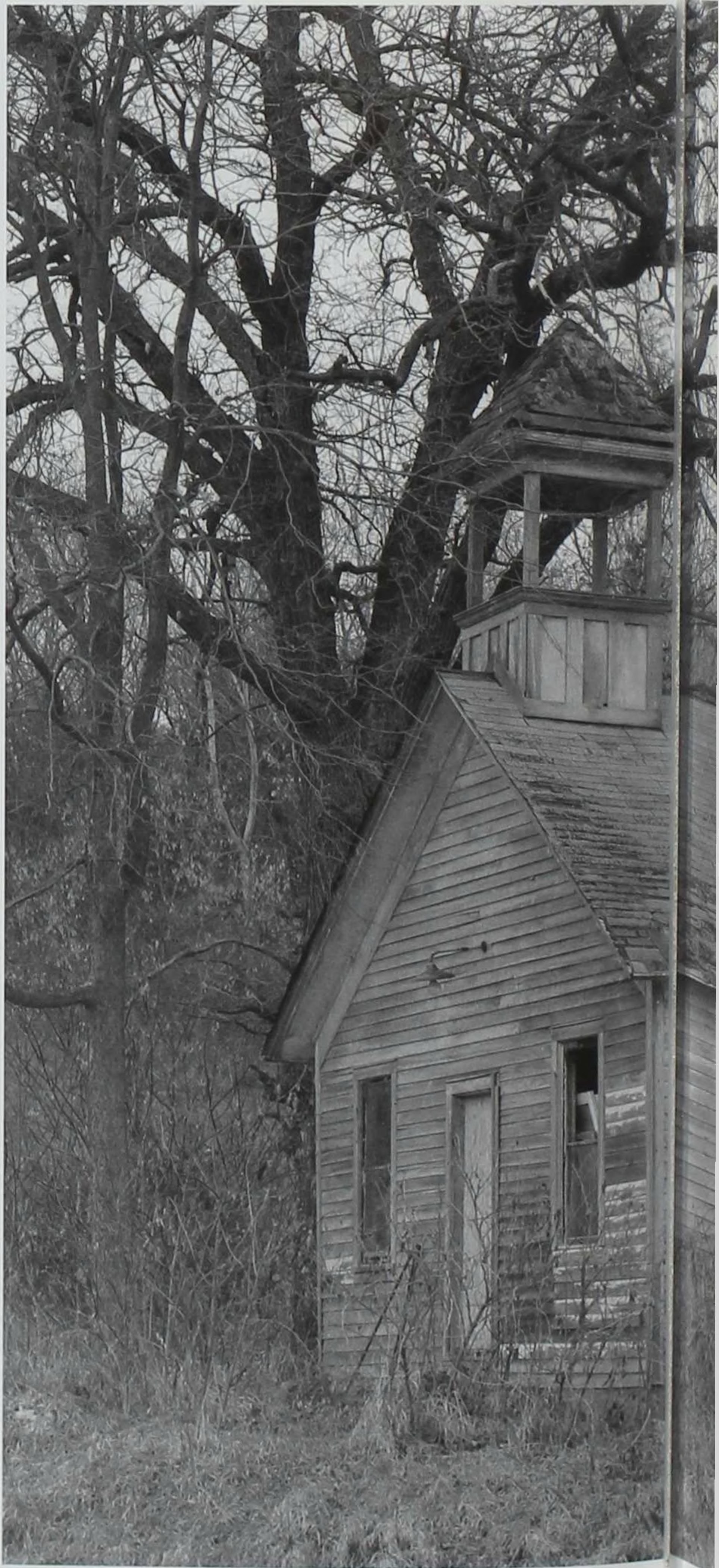
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Right: Ruins in a field, Mediapolis, 2004

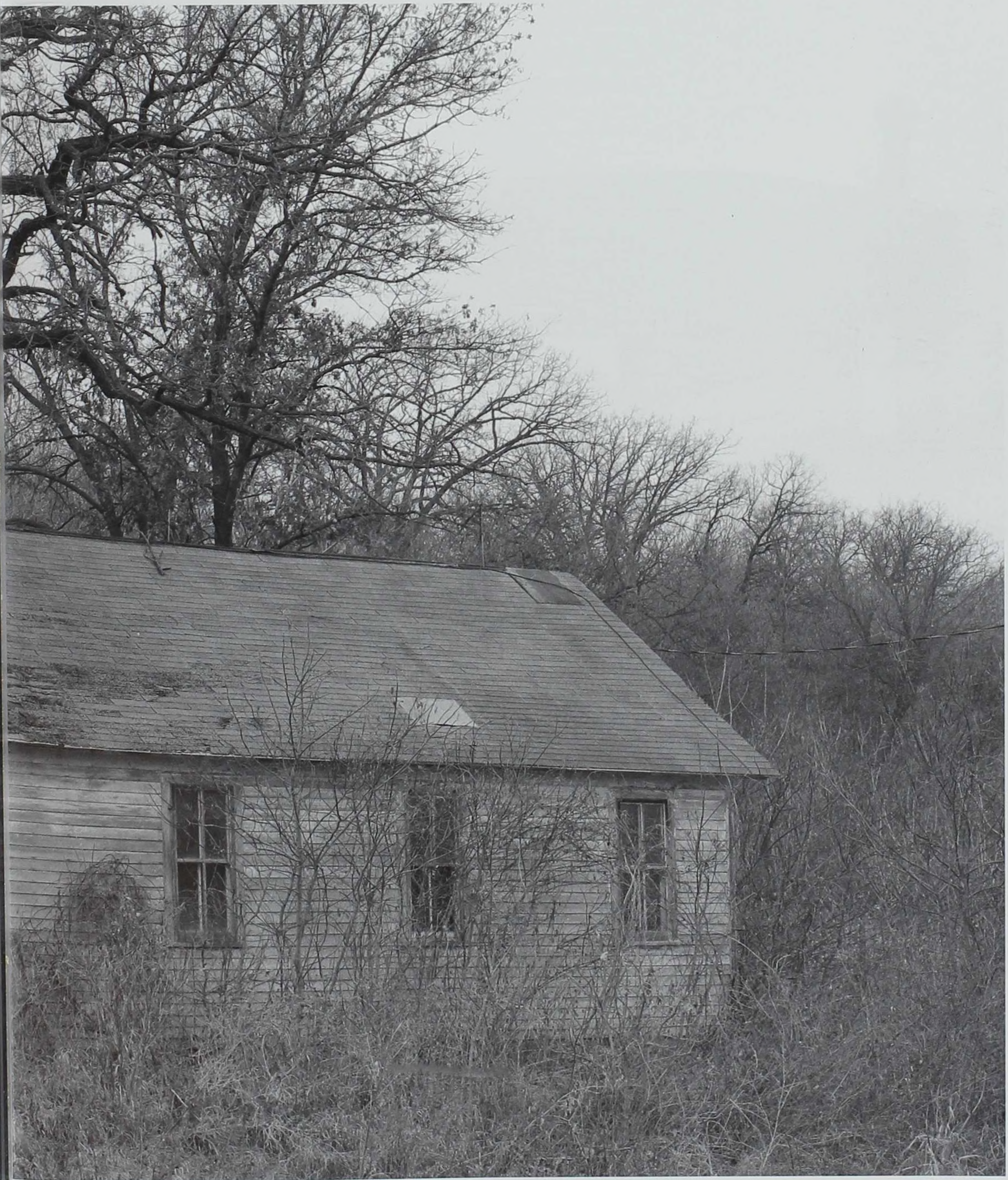




Unknown school, Festina, 2006



Unknown school, Festina, 2006







Left: School bus, Iowa City, 2006

Above: Landru School, Forest City, 2006

Unknown school near Solon, 2005







Unknown school near Solon, 2005



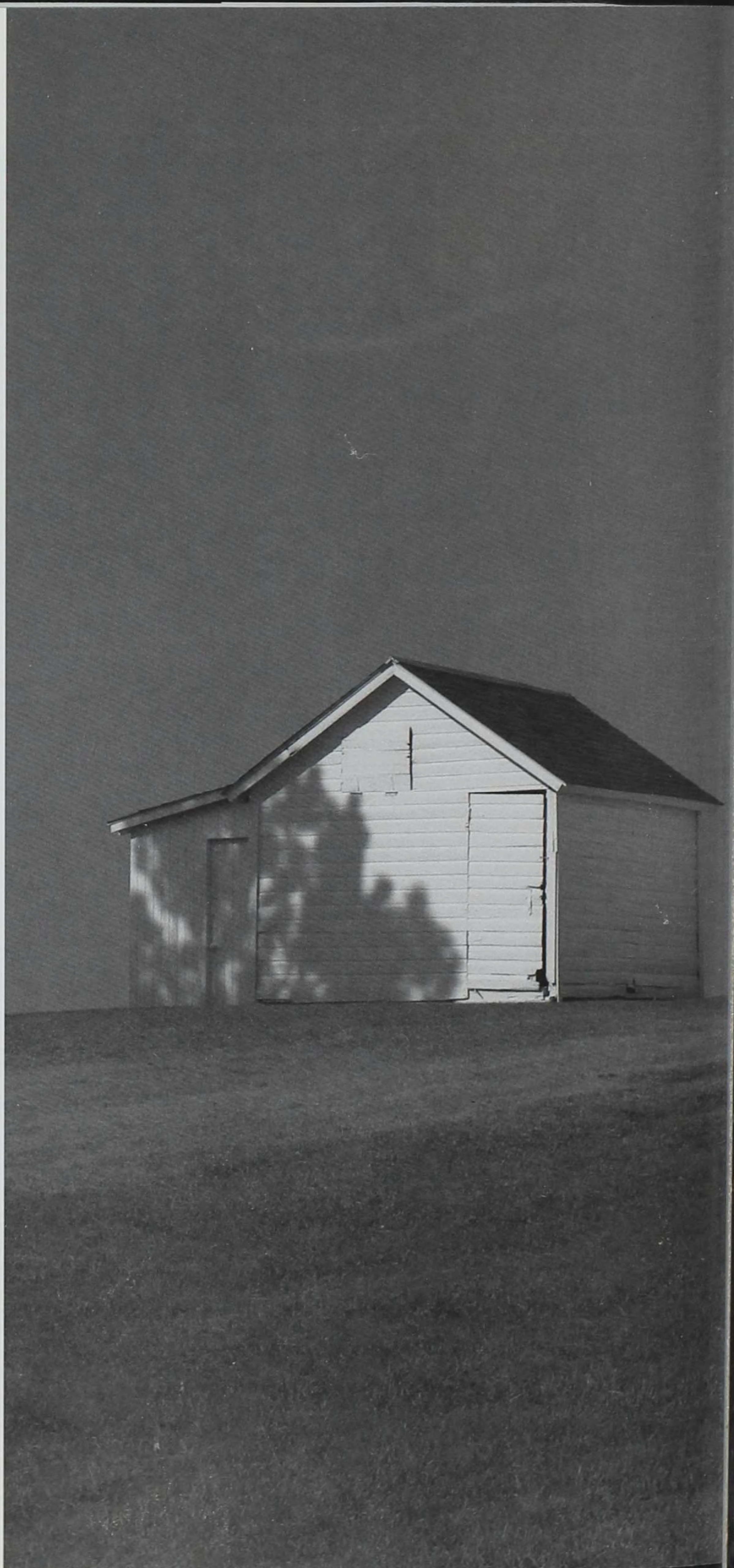
Dexter School,
Madison County, 2004





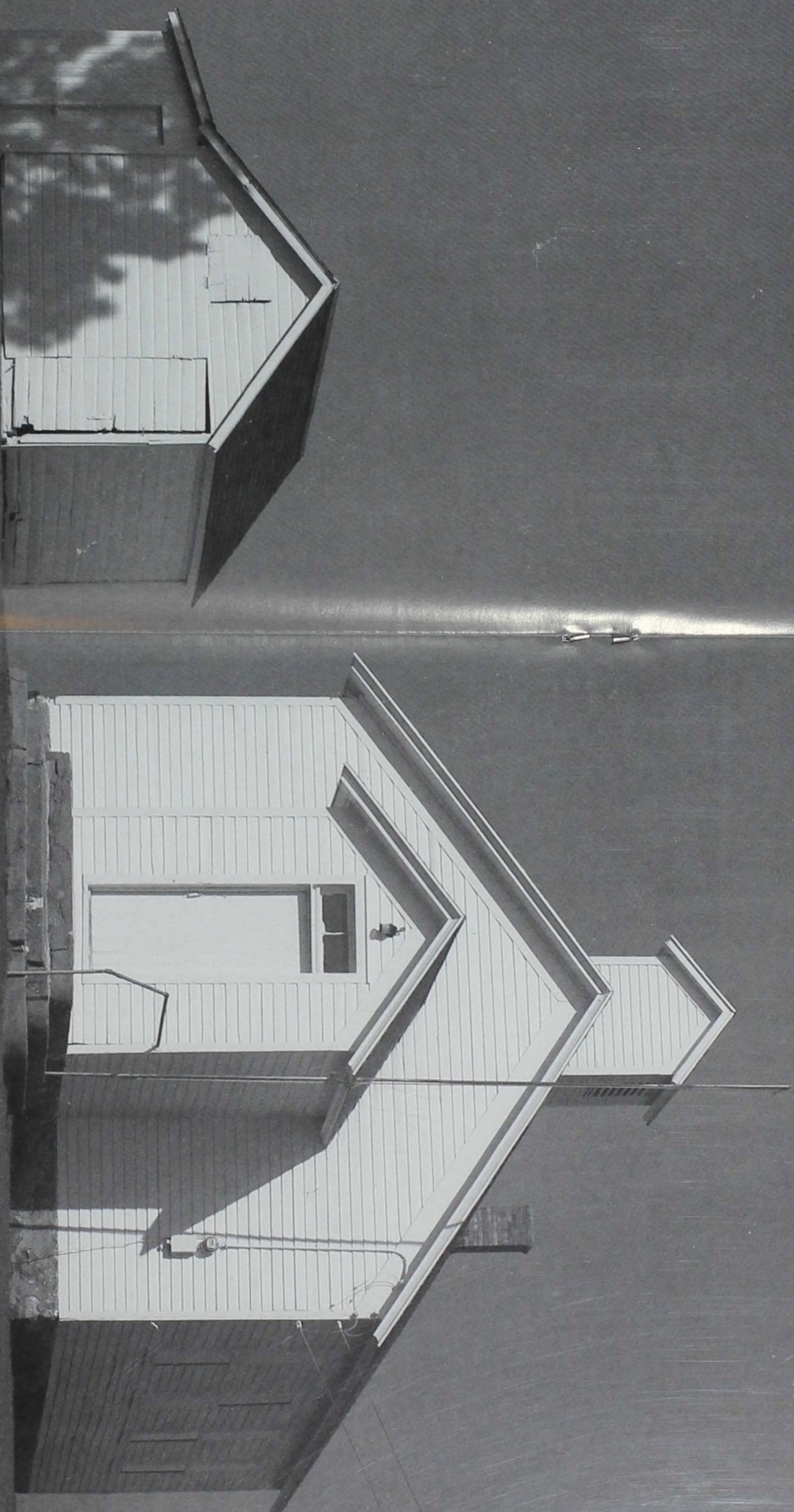
*Dexter School,
Madison County, 2004*

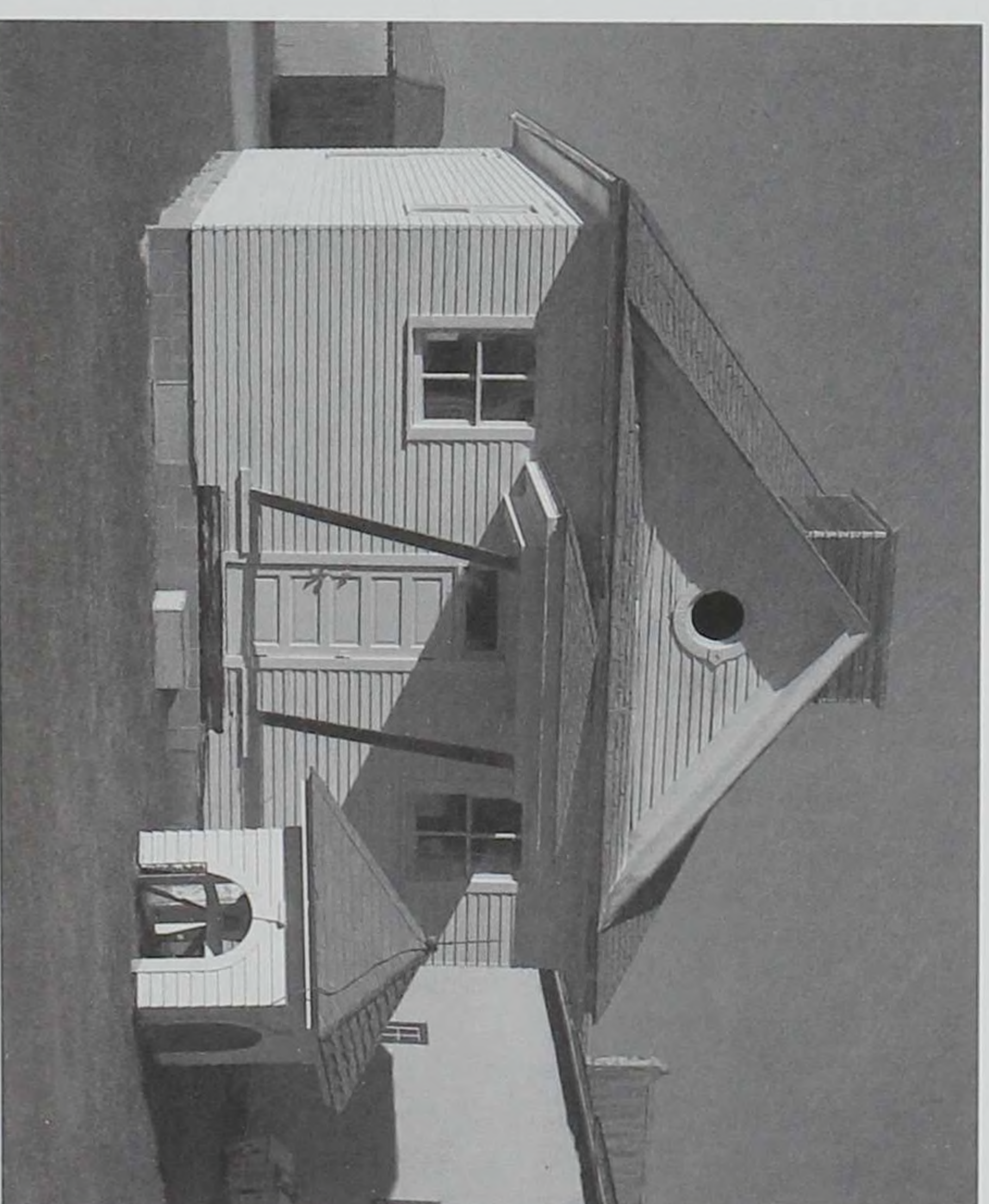
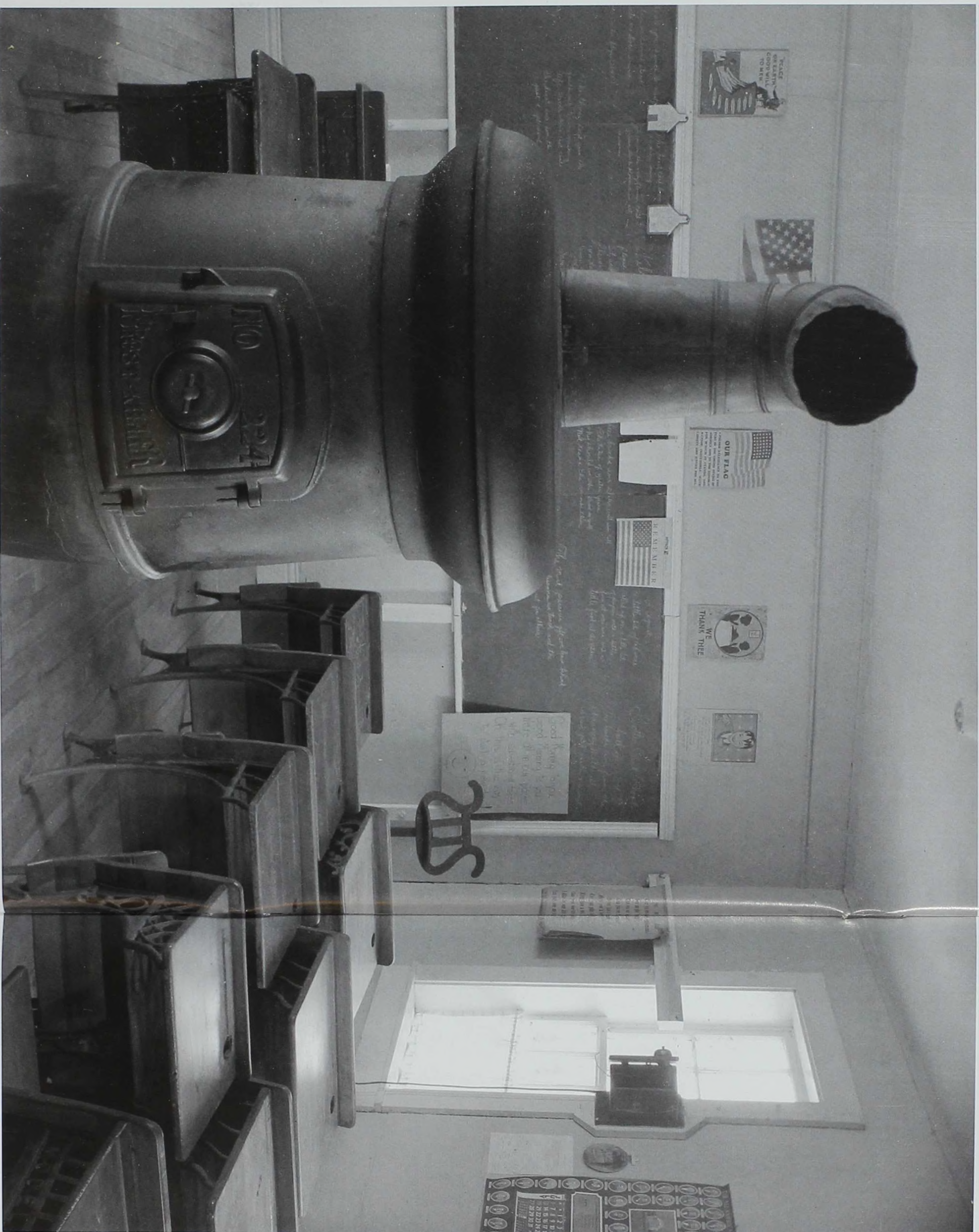
School near Webster City, 2006





School near Webster City, 2006

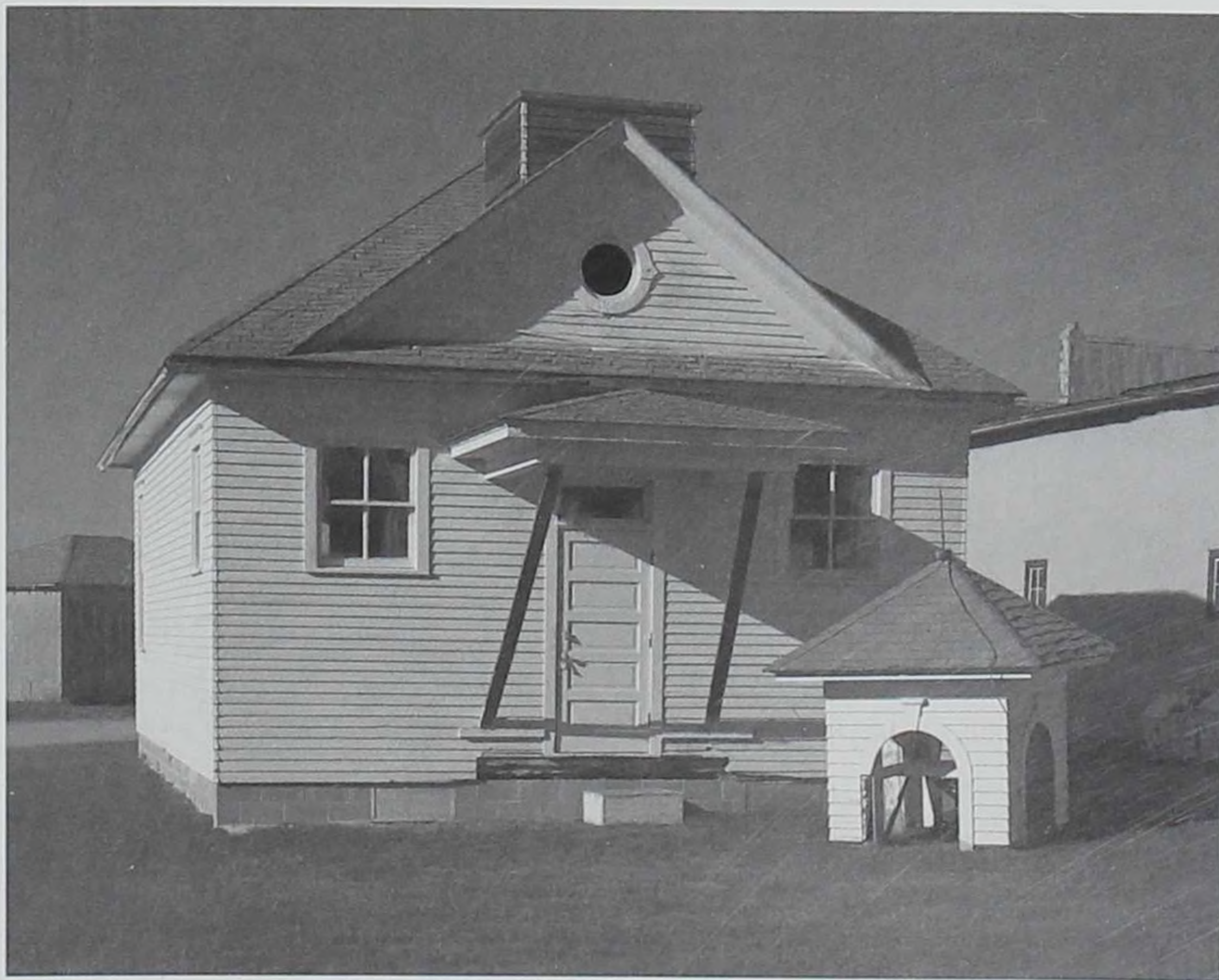
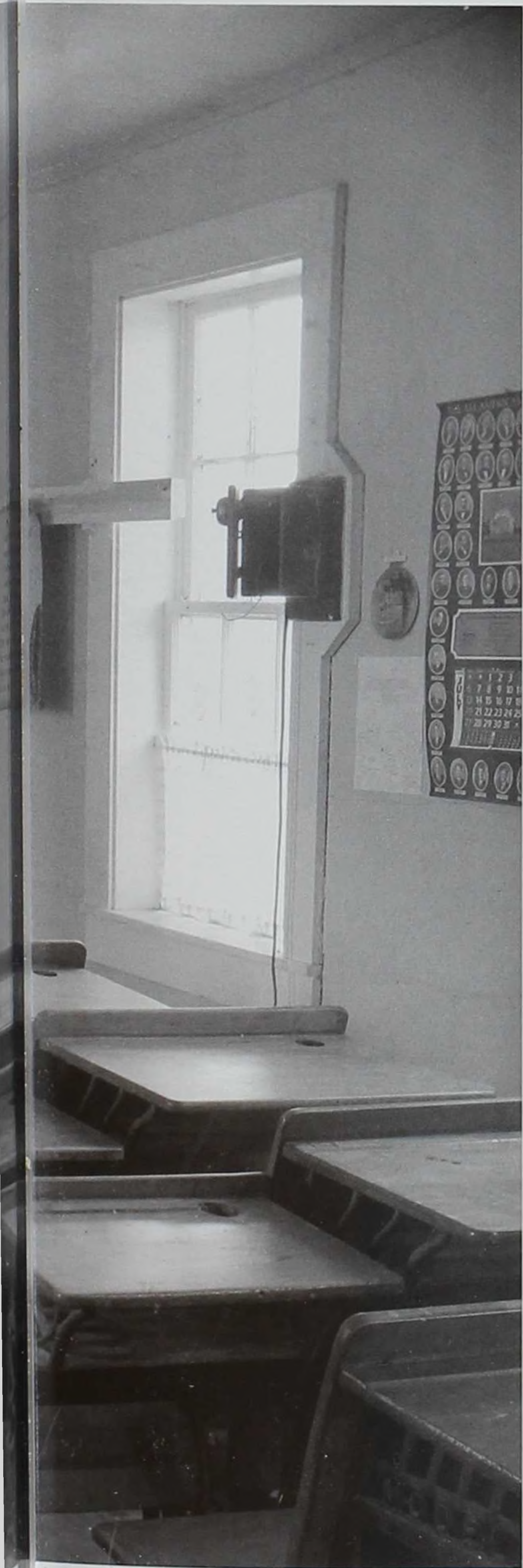




Above: School in Clutter, 2006

Left: Gritter School, North English, 2004



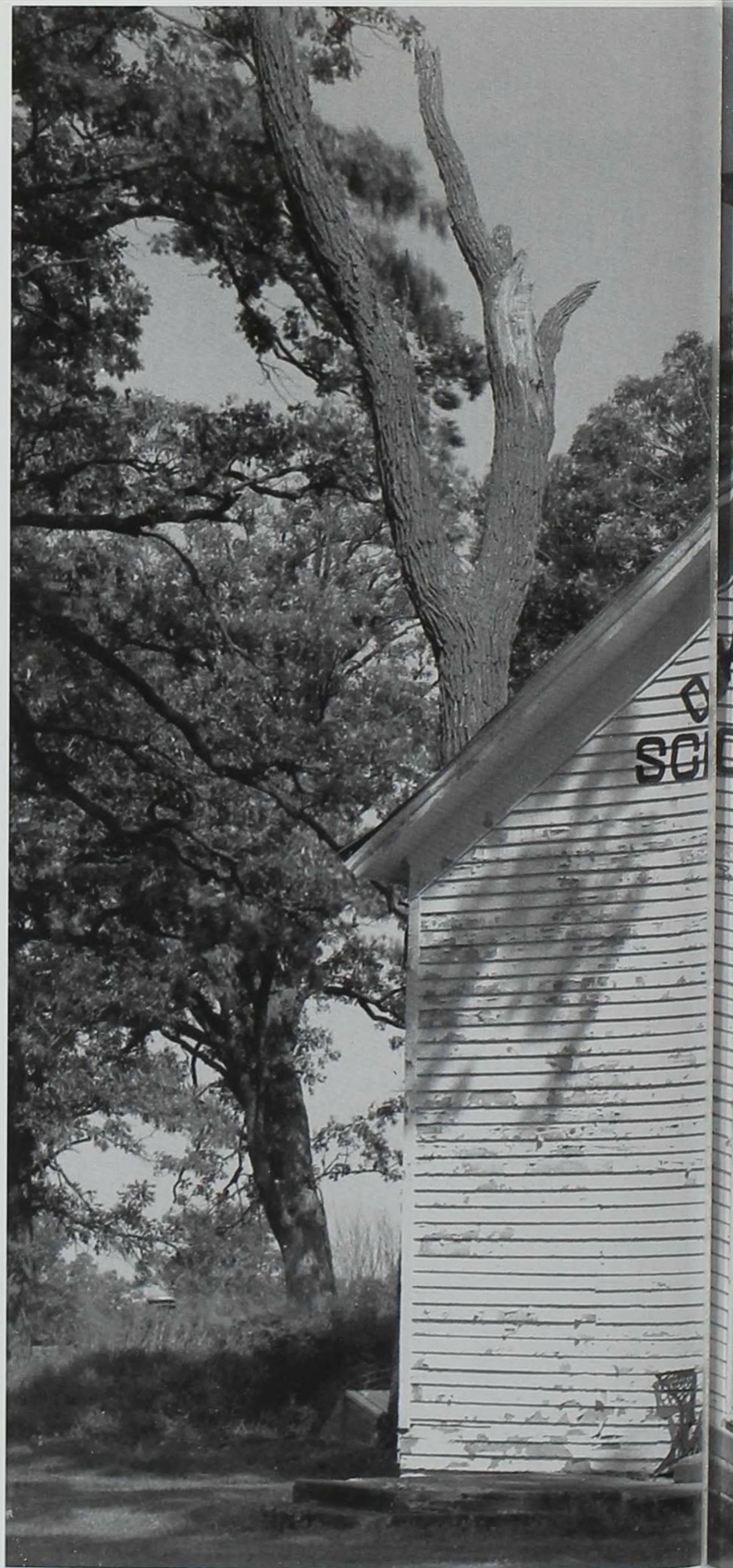


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Left: Gritter School, North English, 2004

Oak Grove School, Marengo, 2004

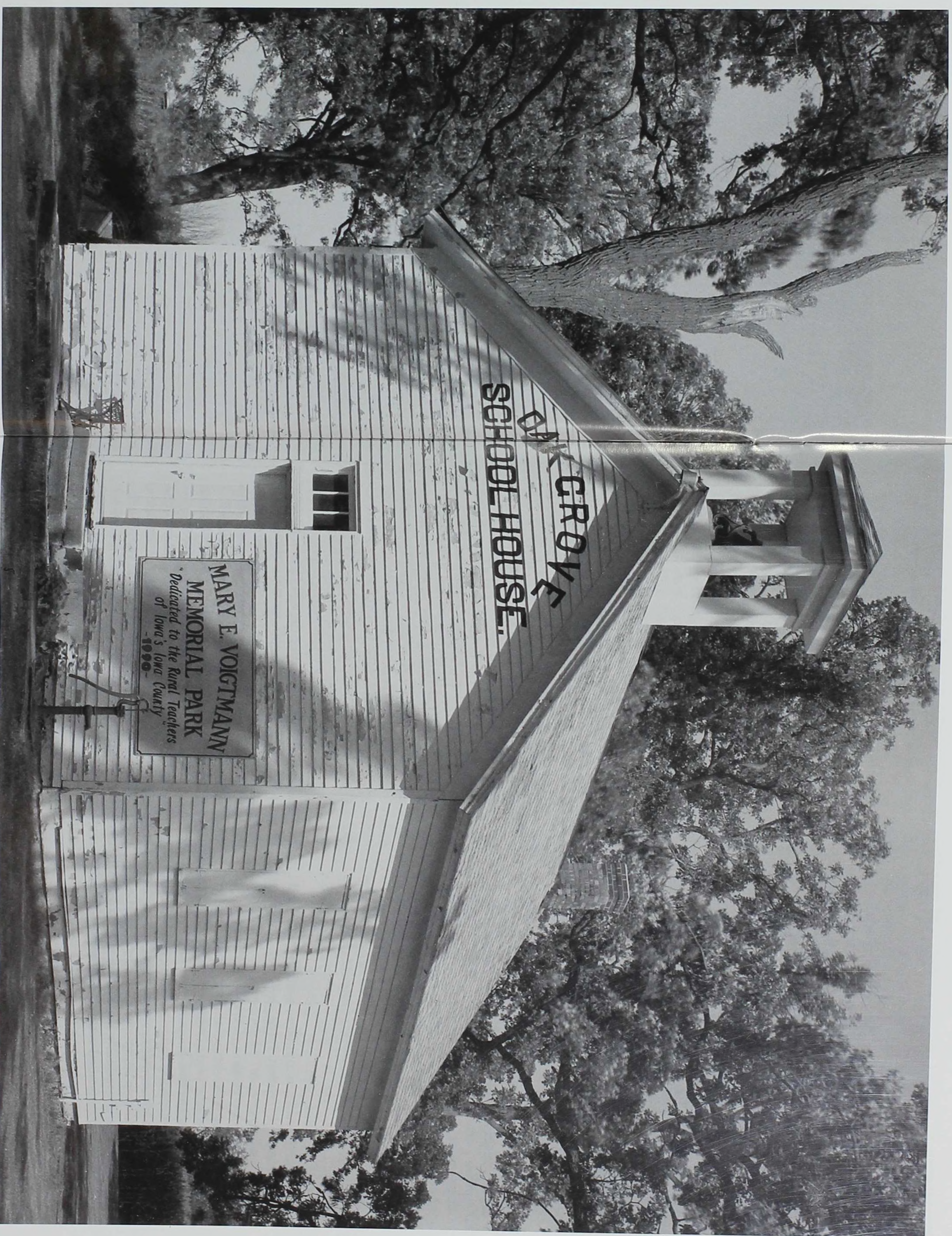
Documentary photographer Michael P. Harker records Iowa's historically significant architecture—barns, one-room schools, courthouses, rural churches, banks, and houses. His most recent book is Harker's *One-Room Schoolhouses: Visions of an Iowa Icon* (University of Iowa Press, 2008). He works with a large format camera in black and white, utilizing the scientific technique of Ansel Adams's Zone System. His career spans more than 37 years.





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Working his way through school in Iowa, Leo Beranek repaired radios, played drums, recorded speeches, and demonstrated sound equipment at funeral homes—jobs that led to an international career in acoustical research and, in 2003, to the Presidential National Medal of Science.

Earning My Way in Iowa



Prologue to a Career in Sound

by *Leo Beranek*

Farm boys learn to tinker at an early age, and I was no exception. I often wonder how much that experience influenced my decision to become an engineer. My special interest in communications engineering almost certainly began in June 1924, when my dad, Edward Beranek, came home with a Crosby one-vacuum-tube radio receiver set that ran on telephone batteries. Using headphones, three people could listen at the same time. I all but devoured the instructions for assembling the set and getting it to work, and gradually came to grasp how radio waves behaved. I installed the antenna and a ground rod, as well as insulating strips under the window to lead wires into our house in rural Johnson County. I tuned in to a host of things: national news, weather reports, music, political debates. One station—WOS in Jefferson City, Missouri—came through particularly

well. I listened every night after doing my homework. One of the most popular entertainers at the time was a jazz pianist, Harry M. Snodgrass, billed as the “King of the Ivories,” whose programs originated from the Missouri State Penitentiary, where he was incarcerated. I was glad when the governor pardoned him, but sorry when his last program aired on January 14, 1925.

I started junior high school, eighth grade, in the fall of 1926 [only months after my mother, Beatrice, had died unexpectedly] and yearned to be more independent. I didn’t bother either my grandparents or my dad about my needs, though, preferring to see what I could do on my own. When I responded to a Real Silk Company ad for salesmen in the *Saturday Evening Post*, the company assigned me—a mere novice—Solon and a nearby village for my territory. It sent me a leather-bound sales kit with samples of its entire line of stock-

ings and fabrics for silk lingerie and blouses. For every sale I concluded, the buyer would make a down payment and the order would be shipped COD through the mails. The down payment was my commission. Even my lady teachers bought lingerie from me, with giggles and some embarrassment. I made a modest but regular income, and remained a Real Silk salesman for two years.

The Solon School band leader urged me to learn an instrument and join. I chose drums. Father bought me a marching drum, and the band leader taught me to play. I grew to be reasonably proficient. After a year, Dad purchased a set of trap drums from a retired professional musician, and I continued my lessons on them. I practiced after classes in the basement of the school building. Trap drums would later help me earn my way through college.

My freshman year in high school was my last in Solon. My widowed father married a woman from a neighboring village, and we moved to Mount Vernon, some 12 miles away, where he became co-owner, along with his cousin Gilbert, of Beranek Hardware. Keenly interested in my future, Dad came up with the idea that I should learn how radios work so that I could make some money installing and servicing sets sold in the store. He enrolled me in a radio course offered by the International Correspondence Schools. I took this quite seriously, even building my own radio set. The next year, he arranged for me to work as an unpaid apprentice to the store's serviceman, Francis Pratt, a senior in Cornell College just down the road (founded 12 years before the more famous Cornell in Ithaca, New York). Francis was an opera buff and, as we fixed radios, we played records on a wind-up phonograph. My apprenticeship completed, when Francis moved on, I was able to set up a radio repair shop of my own over Beranek Hardware. I bought a Model T Ford for \$50 and soon became known as Mount Vernon's "radioman." Meanwhile

I had not forgotten my mother's insistence on a college education. Dad made it clear that, because he was still deeply in debt following the sale of the Solon farm, I must save money for college. My radio repair business was no longer just a pleasant hobby; it was now a means to an end.

Starting in my junior year of high school, and for three years thereafter, I played trap drums in a ragtag dance band. My talent—or, rather, rhythmic instinct

helped along by music lessons—was spotted by Wilbur Powers, a local electrician known to all as "Polly." He put together a dance combo, "Polly and His Parrots." A man of 40, a little on the heavy side, he was a stupendous saxophone player. It was whispered that, though married, he was always on the make for younger women. Our somewhat mismatched band of six played weekly at dances over at the Moose Lodge in Cedar Rapids. The bass horn player, Jake, a model of respectability, was stationmaster for the Chicago & North Western Railway in Mount Vernon. The banjo player, Frank, loved to regale us with stories of his trysts with local married women. The trumpeter, Bob, confined his tall tales to fishing and hunting, with dramatic accounts of narrow escapes from wolves and mountain lions. The piano player, Hildred, a thin, modest woman of 30, tried to distance herself from the seamier escapades of her cohorts—and certainly offered no comfort to Polly and Frank, our resident rakes. Busy with schoolwork and radio fixing, I simply had no time for sharing racy stories.

In school, my competitive streak was starting to show. I forget why, but I signed up for a typewriting class. The girls were honing their skills for office work and there I was, the only boy, intruding on their territory. Though willing to put up with me in general terms, what they couldn't abide was my being top performer. I looked forward to rattling through our weekly typing tests at breakneck speed and with high accuracy, leaving the others in my wake—helped along by a set of fingers well limbered through long hours of dance-band drumming. The outcome was as much fun

as the tests—"If looks could kill," as they say. I had never been one to worry about popularity; my goal was simply to excel in whatever I took on.

During my senior year, I applied for admission to Cornell College in Mount Vernon and was

accepted. Living at home I had managed to save about \$500. In 1931, in the wake of the Stock Market Crash of 1929, panicked runs on banks—and the resulting bank failures—were still commonplace. I recognized that we were on the verge of a deep economic depression, and I worried about the fate of my tuition money on deposit in a local bank. In mid-August, I went to the bank to withdraw \$400. The clerk called an officer, who asked me what I wanted to do with it. When I told him I was going

A few evenings each week, I jumped into my Model T and headed over to Mount Vernon to fix radios or play in the town band.

to pay a year's tuition at Cornell College, he replied: "If you wanted it for any other purpose, I wouldn't give it to you." I headed directly over to Cornell's financial office and put my money down—in the nick of time. The bank closed its doors permanently the very next day, and all depositors lost their savings. I never saw my remaining \$100.

In the middle of my freshman year at Cornell, Dad told me that, because of dwindling business, he had sold his share in Beranek Hardware to his cousin and would move to Cedar Rapids in early March. Now I was *really* on my own—no more free room and board. I lucked out, however, in finding a cheap place to stay for the rest of the school year: Ma Miller's student rooming house, where I lodged at a discount. I applied for and received a scholarship for sophomore year, although I still had to come up with \$60 per semester for tuition.

I worked as a hired hand on a small farm for two summers, 1932 and 1933, not only to earn my keep but also to better my health and physical stamina. The farm lay to the south of Mount Vernon and my duties there fully tested the limits of my strength. To kill weeds around rows of corn, I walked from 8 a.m. to 5 p.m. behind a horse-drawn cultivator, moving slowly but deliberately over ground that the plow had just stirred up in temperatures exceeding 100 degrees on some days. Even though the noon meal meant an hour off, by evening, having rubbed all day against denim overalls, my sweaty legs developed painful chafes, which I salved from a can labeled "For man or beast." Corn cultivation stopped about July 4, but then the oats had to be harvested. I followed behind a binder, operated by my boss, each day plunking down hundreds of bundles (sheaves), six to a shock. Next, hay had to be cut and, after drying, stacked high with a pitchfork onto a wagon and hauled to a barn for transfer into the haymow. Gardens and melon patches had to be weeded, animals watered and fed. On some days, fences had to be repaired and rings put in the noses of hogs to discourage them from rooting. In late July, we harvested melons and picked berries to take to market. Yet, a few evenings each week, I still found the energy to jump into my Model T Ford and head over to Mount Vernon to fix radios or play in the town band.

Because we helped each other out at threshing time, I got to know most of the farmers in that part of

the country. Although Prohibition was in full swing, when one of our neighbors took up bootlegging, we turned a blind eye. I dated a neighbor's daughter, who had been in high school with me, and on Sundays often visited my grandparents in Solon. But I seldom got over to Cedar Rapids to visit Dad and my stepmother. The 20-plus miles seemed like an awfully long way in those days.

I ended the summers tanned and far stronger than I started out. Once, I even hefted a 160-pound keg of nails. I sometimes wonder how much those summers contributed to making my life as free as it has been from illness, and as active in my advancing years—with most of my joints and "marbles" still intact.

The college-owned dormitories and dining halls were way beyond my means. So, when Ma Miller offered no further discounts, I had to find another place to live. In late August, right before the start of sophomore year, I learned that three other students—seniors

—had made arrangements to live in two large, unfurnished, unheated rooms over a bakery on Main Street. They invited me to join them. We needed furniture, a stove, cookware, and dishes. Freddie Katz came up with most of the furniture—four beds, four bureaus, four desks, and a half dozen chairs—on loan from his father's secondhand furniture store in Cedar Rapids. I borrowed an oil-burning stove from Beranek Hardware. Other items came from our parents' homes or were borrowed from friends. We each paid \$4.50 a month in rent, and put in an extra buck or two for breakfasts and evening meals. We cooked one warm course each evening on the stove's single burner. I arranged for the bakery downstairs to pass along their one-day-old bakery goods for a dollar a week. Wilbur Smith dated a college woman who lived on campus and worked in a dormitory kitchen there. From time to time, she filched a whole roast chicken and passed it through a window to Wilbur. Leo Phearman's farm family sent eggs, smoked ham, and fresh fruit from their orchard. Freddie often brought packaged food to the table. How he acquired this we never knew, but I suspect his father helped out. On occasion, I dipped into my meager savings to bring in extra chow. I earned my noon meals by waiting tables in the Fair Deal, a restaurant just down the street.

As a sophomore, I was invited to be a member of

The best surprise [at the world's fair] was the opportunity to hear four hour-long outdoor symphony concerts each day.

Mort Glosser's college dance band. We played at campus dances on Saturday nights. Although my income from this and from my radio repair business took care of the year's expenses, I saw problems ahead. The repair business had fallen off—the Great Depression was deepening—and Cornell's scholarship stipend was smaller than it had been the year before. Because I could see no way to earn what I needed, and because no student in those days—in Iowa, at least—ever thought about borrowing, I resigned myself to enrolling in just one class the next year, mathematics.

Inited to go with the family of the local dentist, Lou Bigger, to Chicago's world's fair in August 1933, I jumped at the chance. The Century of Progress opened my eyes to the world beyond Iowa. I wandered from one exhibit to another, almost in a trance. The ones I remember the most showed manufacturing, such as brand-new tires all wrapped in paper. The stunningly illuminated Electrical Building showed electricity being generated and distributed, with a fireworks display every night. "The introduction of electricity in our daily life is the greatest factor in human progress," announced General Electric, presenting a dramatic set of murals to illustrate its claim. Ford, Chrysler, and General Motors exhibited their latest cars and showed motion pictures of the assembly process. Pabst Blue Ribbon, Schlitz, Budweiser, and Old Heidelberg set up their wares in huge tents filled with tables. Each tent had a stage at one end, where a popular "big band" of the day kept visitors tapping their toes.

The best surprise was the opportunity to hear, not one, but four hour-long outdoor symphony concerts each day. The Chicago Symphony, sponsored by Swift, performed twice a day, as did the Detroit Symphony, sponsored by Ford. I made it a point to attend a concert every day.

The foreign pavilions gave a panoramic sweep of world cultures enthralling to a sheltered Iowa youngster brought up among German-American farmers. I marveled at the Italian, Chinese, Japanese, Ukrainian, Moroccan, Belgian, and French exhibits. High in the air, the Sky Ride Car, a double-decker gondola, sailed from one end of the fairgrounds to the other across a lagoon. Because I had so little money, I lived on popcorn, hamburgers, and two beers a day. When I got

home, I calculated my total expenses for four days at \$12. I went again the following summer.

In the fall of 1933, learning that Albert's, a dry-cleaning and laundry business in town, would house a student willing to help out, I applied and was accepted. I slept in a back room with bags of dry-cleaned clothes hanging some two feet above my bed. I was expected to start the steam boiler and sweep the floors each morning before the owners arrived.

For midwesterners, Halloween was, and probably still is, a major event. I can remember when I was living with Grandmother Beranek in Solon how high the excitement ran, how pranks would sometimes morph into vandalism, and how the townsfolk seemed resigned to this as part of an age-old custom. Main Street usually looked bombed out the morning after. Soap smears covered store windows, wheels from parked cars ended up on rooftops, and sidewalk benches were scattered everywhere. The most adventurous pranksters had absconded with outdoor privies from private homes (there was no town sewer system in 1926), lining them up in not-so-neat rows down the center of Main Street.

Things were pretty much the same in Mount Vernon, although it did have a sewer system. On Halloween in 1933, about 10 p.m., I heard a knock on the front door of Albert's just as I was turning in. Six Cornell students stood in the doorway and asked me to join them in commandeering a large privy

As I was turning in, six Cornell students stood in the doorway and asked me to join them in commandeering a large privy on the outskirts of town.

behind a home on the outskirts of town and moving it to the college dean's front porch. Dean Albion King was an officious sort, with no friends among the students. When I asked my colleagues in crime how they planned to transport the privy, they said they

would simply carry it. Slipping into engineering mode, I quickly calculated the weight and reported the disappointing news: it was far too heavy to be carried. Then I got an idea. Behind the local telephone building, not far from Albert's, was a four-wheel flatbed trailer, which the telephone company used to transport telephone poles. I proposed that we "borrow" it, which we did, and we stealthily headed out to fetch our loot.

The privy was even larger and heavier than I'd calculated, but somehow we managed to tilt it onto the trailer and push and pull it to campus. Within a few hundred yards of the dean's house, a police officer I knew stopped us. I had repaired his radio once.

He asked where we thought we were going with that privy. To Dean King's front porch, I told him, knowing that King's unpopularity extended well beyond the student body. "If you put it anywhere else," the officer replied, "I will arrest you." After a struggle, we managed to stand the privy on the dean's wide, covered porch without waking anyone up—and to roll the trailer back to where we found it with no one the wiser.

The next morning, Dean King came to school fuming, exactly as we'd hoped. His suspicion fell right away on the likely perpetrators—the Deltas, a fraternity made up mostly of athletes. He grilled them, one by one, in his office. But none had been in our group, and, in the end, the dean failed to identify any of the culprits. He never suspected that I, of all people, had been willing not only to embark on such a disreputable scheme but also to make sure that it succeeded.

I soon became close friends with one of my mathematics classmates, Harold Ericson, a tall, slender fellow with a pleasant manner and disposition whose father owned a telephone company in Hector, Minnesota. Harold was a ham (licensed amateur radio station operator) and knew lots about radio receivers and transmitters. He urged me to get an amateur license, too, so that I could share in the use of his transmitter. This meant I had to learn Morse code. Harold loaned me a small code-sounding machine, and I learned the dits and dahs (dots and dashes) of the Morse alphabet. When I felt confident enough to pass the test, I went by bus to a Federal Communications Commission (FCC) examination center in Des Moines. All candidates had to show they could send and receive code at not less than 10 words a minute. I squeaked by, earning the call letters "WRER," which I could use as my signature anytime I broadcast. This experience came in handy later when I went to graduate school.

At some point in the fall of 1933, the head of Cornell's speech department happened to mention how helpful it would be for his students—as a measure of their progress—to record their voices before and after their year of speech training. I later chanced on an advertisement in a radio magazine for a small recording

As the spring of 1934 approached, I found myself in financial straits once again and realized I would need to find a full-time job to accumulate some savings.

machine, which, I found out, could produce embossed aluminum records at a cost of about 50 cents apiece. I went back to the professor and told him that I would buy the machine out of my own pocket if he would commission me to produce a 5-inch aluminum record for each student at a dollar apiece. He agreed and, in the small studio I built in one corner of a physics lab, I recorded every member of his class before and after a semester of speech training. This brought me in contact with the field of acoustics for the first time. I

learned something about acoustics from a book in the college library, little realizing that it would become a major part of my professional life in the years ahead.

As the spring of 1934 approached, I found myself in financial straits once again and realized I would need to find a

full-time job to accumulate some savings. In April, I applied to the fledgling Collins Radio Company in Cedar Rapids. The young president, Arthur Collins, interviewed me personally and offered me a position at \$14 a week, starting May 15. Arthur was the son of a wealthy real estate dealer, M. H. Collins, who had managed to avoid the worst of the bank and stock failures during the Depression. Arthur was known locally as boy inventor and radio wizard extraordinaire. Arthur's father set him up in Collins Radio, which at first manufactured only transmitters for amateurs. His breakthrough came in 1928, when he was chosen to equip Admiral Richard Byrd's expedition to the South Pole with a small transmitter that ended up performing magnificently. I became a friend of Arthur's and he invited me to his home several times to look over his amateur radio equipment and to share an evening with his family.

Now that I was leaving Mount Vernon, I decided to sell my radio repair business, which I did, to Harold Ericson for \$40. I stored my drums and headed for Cedar Rapids, where I rented a room for a dollar a week in the home of an elderly couple. I remember keeping close tabs on the clock, as we had warm water available just two hours a day.

Collins Radio was moving ahead with some fairly adventurous marketing strategies at the time, particularly with a view toward broadening its clientele for the manufacture and sale of sound systems. One possibility was that funeral homes might play recorded

music during services. I was assigned to go on sales expeditions with an old salesman, Jim Thompson, who was about 35, and had little in the way of technical know-how. My job was to demonstrate equipment, answer technical questions, and help plan the kind of system each client needed. Collins gave us an old Cadillac, a four-door sedan, to travel around in. We visited funeral homes all across Iowa, staying in low-cost motels as we roamed the countryside.

[In September the company asked me to stay on as an assistant in the engineering department.] I kept very busy outside of work, reading books that ranged from dime mysteries to engineering texts, and going out on dates. On one such date, I met Florence (Floss) Martin, a beautiful, slim woman some three years younger than I. Floss was attending business school in Cedar Rapids and lived with her aunt in a modest second-floor apartment not far from me. She and I hit it off from the start, finding plenty to talk about, and I began seeing her regularly.

We liked going to movies and kicking up our heels at Danceland, the city ballroom. By the time I returned to Cornell, Floss was my steady girlfriend, and we had even talked about getting married someday.

In January, I made plans to return to Cornell. Arthur Collins appeared sorry to see me go, but I had put aside what I had aimed to—a pot of savings to help me finish up college—and along the way I had learned a lot and gotten to know some interesting people. I arranged with Harold Ericson to share in (now) his radio repair business back in Mount Vernon. Cornell awarded me a second-semester scholarship of \$112.50, which meant that I only had to find \$87.50 for tuition. Another lucky break: fellow student Richard Rhode asked me to join his popular college dance band. I played drums with them about once a week, earning \$4 each time.

At the end of the semester, I went back to Cedar Rapids to spend the summer working once again for Collins Radio. I moved into the same dollar-a-week room that I had previously occupied and, always a planner, I started thinking about what I would do after graduation, just over a year away, when something happened that led me in a direction I never expected. On Friday evening, August 16, 1935, I drove to Mount Vernon on the Lincoln Highway, which then went

from New York to San Francisco, passing through Mount Vernon along its Main Street. I spent the night on the back-porch swing of the Bigger family's home. After lunch, having passed the morning at the Cornell Library reading technical periodicals, I was strolling along Main Street when I came across a Cadillac with Massachusetts plates standing at the curb with a flat tire. Beside it was a well-dressed man looking glum. When I asked him if I could help he jumped at the offer. As I worked away with the jack and lug nuts, we engaged in a friendly exchange. I told him that I was between my junior and senior years at nearby Cornell College and how I wanted to go to graduate school, but could not afford to unless I were to obtain a scholarship. He asked me about my majors and my grades. I cheerfully answered and said that I was planning to submit scholarship requests to the University of Iowa and to the universities in the states surrounding Iowa.

At the mention of my work as a radio repairman, he perked right up. "Radio is my business," he said. He asked for my name, and after responding, I asked for his. "You are Glenn Browning?" I blurted out. "I just read one of your papers on the Browning Tuner in *Radio News* this morning in the library." Suddenly I had a new friend. He wanted to know if I had considered going to Harvard University. "No," I said, and then—before I could catch myself—"that's a rich man's school."

Smiling, he informed me that Harvard had more scholarship money to offer than any of the schools I had named. He opened the door to the front seat of the car and took out a pad of paper on which he jotted down the names and addresses of two people at Harvard—one for ad-

missions and the other for scholarships. "When you submit the paperwork," he said, "use me as one of your references." I would learn later that he had spent three years as an instructor at Harvard's engineering school before opening a successful radio manufacturing business in suburban Winchester.

That fall, I sent scholarship applications to various state universities. I also sent one to Harvard. When I wrote to Browning in February 1936, thanking him for letting me use him as a reference, he wrote back that he had already been contacted by Harvard's dean of engineering, had put in a good word for me, and wished me luck.

Strolling across Main Street, I came across a Cadillac with Massachusetts plates and a flat tire. Beside it was a well-dressed man looking glum.

Letters from the state universities started arriving in March—all of them saying, in effect, that my grade record and references were satisfactory, but that, because there were so many applicants, they could not offer me a scholarship. Then a letter came from Harvard. I opened it slowly, anticipating yet another letdown. Dated March 27, 1936, it stated, "I am very happy to tell you that you have been awarded a Gordon McKay Scholarship of \$400, covering your tuition for study in the Graduate School of Engineering at Harvard University during the academic year 1936-37." When the news got out, I could barely contain my joy. I became an instant celebrity.

**Then a letter came from Harvard.
I opened it slowly, anticipating
yet another letdown.**

In my senior year, I bought back the radio repair business from Harold Ericson and took up residence at the Neff Funeral Home on Main Street in Mount Vernon, where, in lieu of rent, I helped undertaker William Neff pick up corpses, usually in the middle of the night. To finish up at Cornell that summer, I piled on the subjects: sociology, mathematics, philosophy, German, physics, and art.

At the beginning of the school year, I was elected to the Alpha-Theta-Alfa fraternity, with headquarters in Ma Miller's rooming house just off campus. As part of our hazing, about a dozen of us pledges were given a list of things to get done in one evening: steal some watermelons, pilfer a pig, swipe a girl's panties from a dormitory, and answer a set of tricky questions correctly. The penalty for failure was a dozen or so whacks on the rear with a large paddle—a fate we wanted to avoid at all costs. We drove over to see the farmer I had worked for who raised watermelons and who let us "steal" enough melons to treat our whole fraternity. At one of the girls' dormitories, we stood outside and yelled up our plea for a pair of panties; to our surprise, not one, but two pairs came flying through an upper window. Another farmer I had come to know during my summer stints agreed to let us "pilfer" a pig, on condition that if the animal were not returned, we would pay him \$20. With our booty in hand, we got back to the house about two hours after we started out. After correctly answering the tricky questions, we were showered with praise. But the pig got away from us and we couldn't find it in the dark, so the next day we had to fork over \$20.

To make extra money in my senior year, I added retail sales to my radio repair business, with a shop on the second floor of a building on Main Street. I convinced the RCA and Atwater Kent radio suppliers to ship me a dozen sets. My shingle over the entryway downstairs read: "Leo L. Beranek, Radios and Service." I found an unemployed man—about 40 years old, intelligent, nicely dressed, and clean looking—to run the sales room whenever I was doing other things, mostly schoolwork. The radios sold well and my repair business picked up, too. I also hired an electrician to help and wired some private homes.

I attended classes during the day and studied in the library in the morning and early afternoons, where I could be certain to avoid interruption. In the late afternoons, I tended to the radio business. That winter, Cornell President Herbert Burgstahler sent out a questionnaire to all students asking how many hours a week we spent on nonacademic activities. The answers were anonymous, and I reported 40 hours. In our compulsory chapel service, Burgstahler announced the results and made a special point of observing that whoever reported spending 40 hours a week outside could not be getting much out of college.

The New Year brought much change. When radio sales dropped off but the house wiring side of my business grew—because my rates were cheaper than those of the Iowa Electric Company and I benefited from subsidies under the Federal Rural Electrification Act—I decided to concentrate on wiring and stop selling radios. An advertisement I placed in the Mount Vernon paper read: "Radio Clean-Up Sale! Friday, Saturday and Monday, January 24-25-27." And, sure enough, I pretty much cleaned out my stock that weekend.

One day every weekend, I would drive over to Cedar Rapids to see Floss. Some Sundays we went to her church, First Christian, and took part in young people's fellowship activities there. Sometimes she would catch the bus to Mount Vernon and we would attend a college social together. We also exchanged letters weekly. Then came the day we went on a picnic with a small group of her relatives. This being the first time I'd met the greater family, I wanted to make a good impression. No such luck. Floss's aunt asked me to drive her car. But, as I pulled out of her parking space, I pressed down too hard on the accelerator, clipping and bending the bumper of the car in front and causing the bumper on our car to fall off altogether. The usual awkward exchange of information and documents was made even

more awkward because I had no license to exchange and could only stand there, looking foolish. When the aunt's car went into the garage a few days later, fortunately, nobody asked me to help out with the repair bills.

With graduation not far off, three opportunities for wiring jobs came up at Cornell. In June, I wired the dining-hall addition to Bowman Hall and, a month later, completed the rewiring of Rood House. My third job was the most ambitious of all. I had convinced the building committee that a central antenna system should be installed in Merner Hall, a new men's dormitory then under construction—at a fixed price of \$556.58. Later that summer, the *Cedar Rapids Gazette* announced: "Individual radio outlets [at Merner Hall] are

connected with a master antenna system designed and installed by Leo Beranek of Cedar Rapids. The antenna on the roof of the hall is connected with room outlets by a continuous system of wiring in conduits."

I received my bachelor's degree in the summer of 1936, just as I had hoped. I missed Phi Beta Kappa by a tenth of a point, but Cornell made up for that 26 years later by naming me an honorary member. Diploma in hand, I sold my radio business to a repairman in Lisbon, Iowa, for \$99 at the end of August.

With a mix of excitement and nervous anticipation, I started to gear up for what was looking more and more like a risky plunge into the unknown. I had saved about \$450, which—along with my scholarship—I was hoping could be stretched to cover rail fare, room, board, and essentials for a year at Harvard. But I was already wondering, then what? ♦

Epilogue

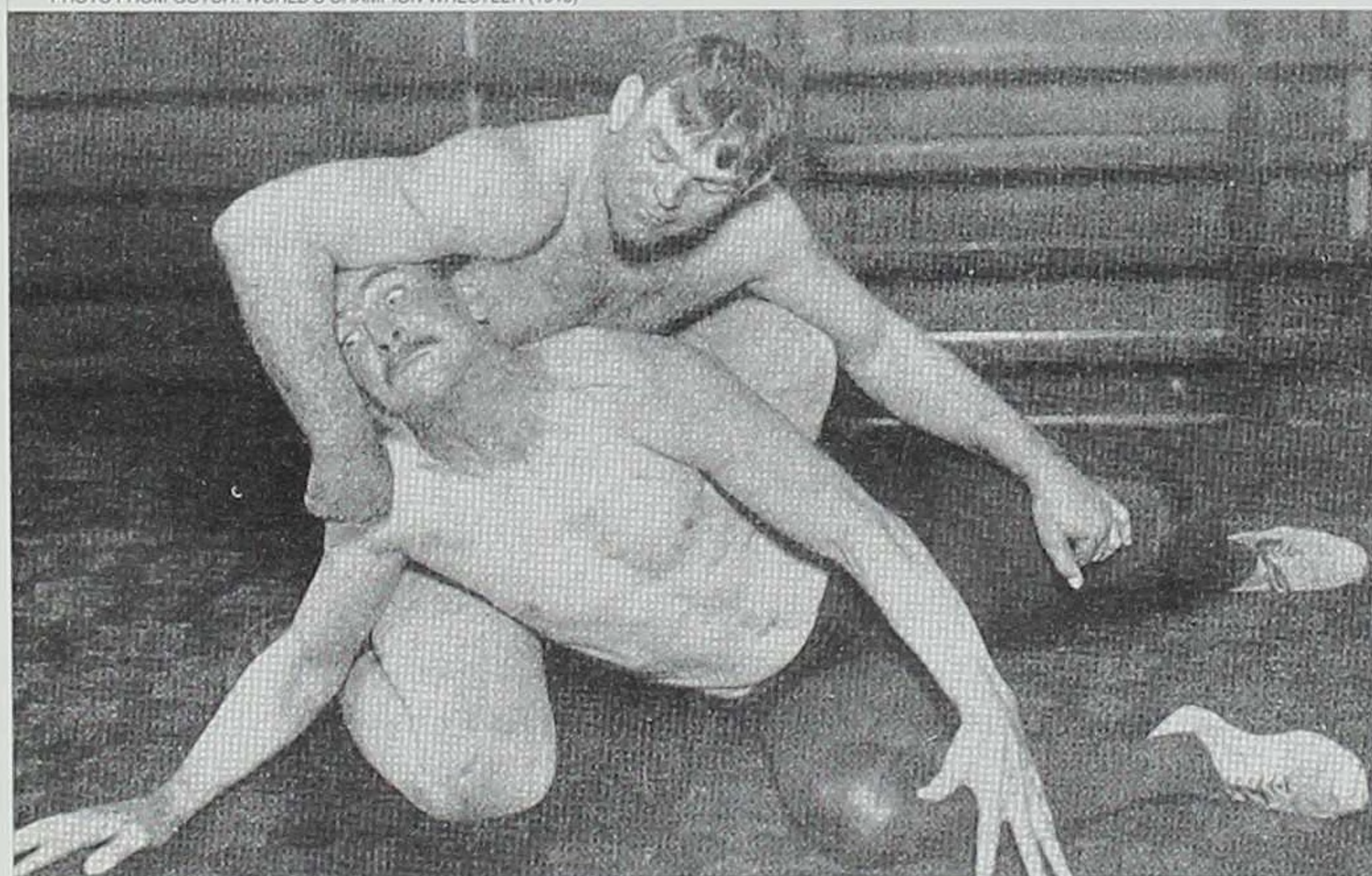
Editor's Note: Leo Beranek received his master's degree from Harvard in 1937 and his doctorate in 1940. He married Phyllis Knight in 1941.

This article is extracted from chapter one of his autobiography, *Riding the Waves: A Life in Sound, Science, and Industry* (MIT Press, 2008), reprinted with permission. To quote MIT Press, "Beranek went on to be one of the world's leading experts on acoustics. . . . Known for his work in noise control and concert acoustics, Beranek devised the world's largest muffler to quiet jet noise and served as acoustical consultant for concert halls around the world (including the Tanglewood Music Shed, the storied summer home of the Boston Symphony Orchestra). As president of the consulting firm Bolt Beranek and Newman, he assembled the software group that invented both the ARPANET, the forerunner of the Internet, and e-mail. . . . In recent years, he has served as president of the American Academy of Arts and Sciences, Chairman of the Boston Symphony Orchestra, and a member of Harvard's Board of Overseers. The many awards he has received include the Presidential National Medal of Science, presented in 2003."

For more on Beranek's autobiography, visit <http://mitpress.mit.edu> and search for "Riding the Waves."

Wrestling in Iowa

PHOTO FROM GOTCH, WORLD'S CHAMPION WRESTLER (1913)



Frank Gotch employs the headlock on Martin "Farmer" Burns.

The Legacy of Frank Gotch and Farmer Burns

by Clare L. Kernek and Leah D. Rogers

Iowa's strong wrestling tradition rests heavily on the popularity and success of professional wrestler Frank Gotch, the undefeated world champion. He and his teacher, Martin "Farmer" Burns, another Iowa farm boy turned pro wrestler, are credited by those later involved with team college wrestling programs with having been hugely influential in the sport's development. In addition to the clubs organized by Burns where young men learned the fundamentals, pro wrestlers like Gotch were celebrities who generated interest in the sport. Cornell College coach Paul Scott remembered from his boyhood the excitement generated in West Liberty when touring pros would come to town. Before the bouts at the local opera house, he recalled, the local boys would engage in wrestling matches of their own.

In his own era, there was no star bigger than Frank Gotch, whose fame extended far beyond the wrestling or sports world. Gotch biographer Mike Chapman explained that in terms of celebrity he was not just the Dan Gable of his time, he was "more like a Michael Jordan." By the time he died in 1917 at the age of 39,

Gotch "had become the best-known athlete in the country." According to writer Mac Davis, "babies had been named in his honor, as had buildings, toys [and] farm implements. . . . The word 'Gotch' was a synonym for quality and strength."

Born on a farm south of Humboldt, Iowa, in 1878, Gotch did not begin wrestling with the intention of making it his career. In the late 19th century in Iowa, impromptu wrestling matches were a common form of entertainment in rural communities. According to Cornell coach Barron Bremmer, "there was a lot of pride generated by the local wrestlers. Someone would say they had an unbeatable guy, and someone from another community would challenge them."

It was such a challenge that started Gotch on his professional wrestling path. By the age of 20, while still living and working on the family farm, he had earned a reputation in his neighborhood as a tough wrestler to beat, and was chosen by the town boys to go up against a chicken picker who was looking to "wrestle all comers." Bets were placed, and Gotch returned to his farm "toting some silver dollars that looked

mighty big to me," according to his biography.

The historic meeting between Gotch and his future teacher occurred several months later in December 1899 when Farmer Burns was touring around the Midwest offering \$25 to any locals who could last 15 minutes against him. Gotch traveled with some friends to Fort Dodge to try his chance at the prize money. Although Burns, holder of the 1895 national heavyweight title, did manage to pin his young challenger within the allotted time, he was impressed by Gotch's performance. After the match at the opera house, he announced to the crowd that Gotch was the most talented amateur wrestler he'd ever seen in his life. "If he will go with me," Burns declared, "I will make him champion of America in a few months."

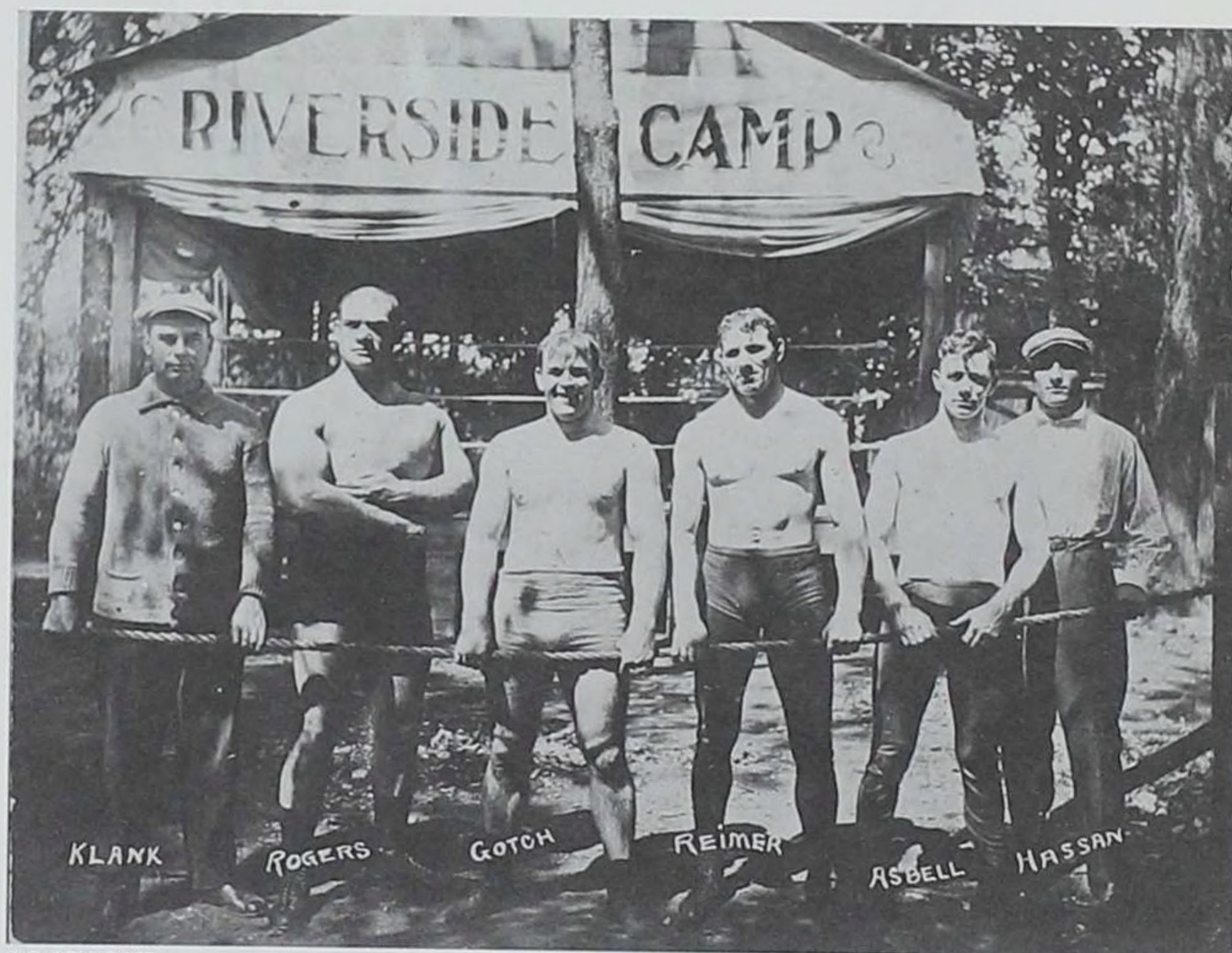
Although Gotch was naturally gifted with a rare combination of power coupled with amazing speed and agility, he would later give much of the credit for his success to his partner and trainer, Farmer Burns. Gotch later remarked, "I had wrestled side holds with the big lads of the neighborhood and played rough and tumble at the auction sales, but what I didn't know about wrestling of the Farmer Burns kind would fill a mighty large volume."

Burns was an experienced teacher who in 1893 had started a gymnasium in Rock Island, Illinois, just across the Mississippi from Scott County, where he resided. He also worked with wrestlers, including Gotch, at his farm near Big Rock in Scott County. After the two joined forces, Gotch indeed experienced swift success. He was undefeated in 1900, his first year with his new trainer, and in 1901 brought home \$35,000 in winnings (over \$800,000 in today's dollars) from a six-month stint wrestling miners in the Klondike. Upon his return, he had a string of undefeated matches, including one against his teacher. Although he lost his first bid for the national title in a hard-fought match against six-time winner Tom Jenkins, considered one of the strongest grapplers in history, he finally reached his

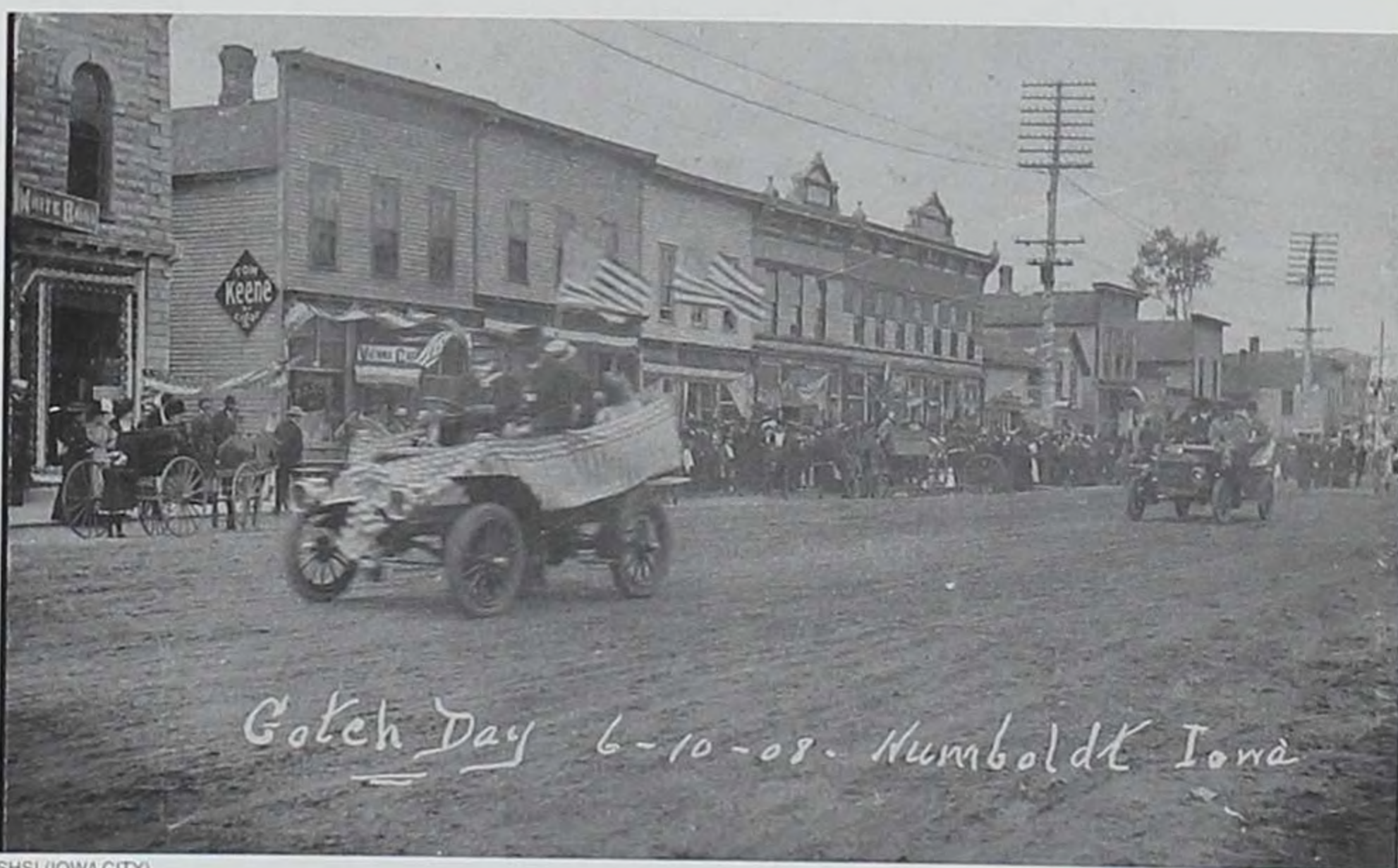
Top: The Riverside Training Camp in Humboldt (Gotch's hometown) drew wrestlers and onlookers. From left: Emil Klank, Yankee Joe Rogers, Gotch, Jess Westegaard, and two unidentified men.

Middle: A parade in Humboldt celebrates "Gotch Day," 1908.

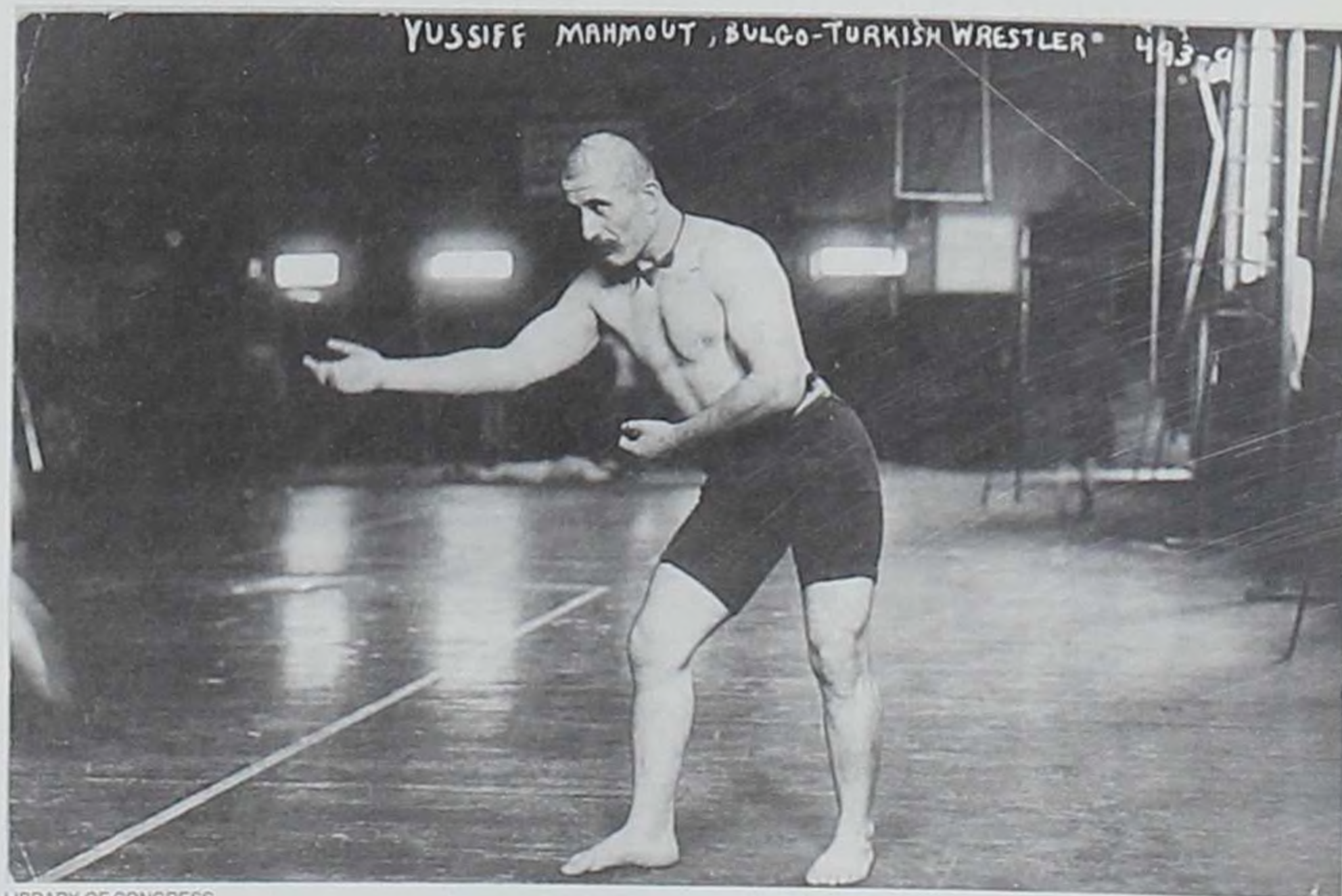
Bottom: Gotch's international opponents included Bulgarian Yussiff Mahmout. Gotch defeated him easily.



SHSI (DES MOINES)



SHSI (IOWA CITY)



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goal of becoming the American heavyweight champion in a rematch in 1904. The national media took note of wrestling's new star as Gotch's success continued in "catch-as-catch-can" matches from coast to coast. In 1906 he won an international tournament in Canada, where he swept aside the competition from 50 different countries "like chaff before a hurricane," as one contemporary account described it.

Gotch's greatest matches were his legendary contests against George Hackenschmidt, the "Russian Lion," for the world title. Historian Mike Chapman describes Hackenschmidt as "perhaps the most feared wrestler of any generation" who had "defeated Jenkins easily in his only other trip to America." Before their first meeting on April 3, 1908, in Chicago, Farmer Burns advised Gotch to try to wear "Hack" down by leaning heavily on the back of his opponent's neck with his forearm, instead of trying for a fall. In preparation, Gotch embarked on a demanding training regimen that included wrestling for several hours a day and running for miles through the countryside around Humboldt. The strategy worked. After two grueling hours of struggle between the men, the defending world champion, considered unbeatable by many, surrendered in a whisper: "Mr. Gotch, I give you the championship." Frank Gotch became the first American to claim the title.

After his victory over Hackenschmidt, Gotch's celebrity reached new heights in America and throughout Europe, due not only to his mastery on the mat, but also to his role in a play about wrestling in which he toured throughout Europe. According to Chapman, "Crowds of 5,000 to 10,000 came just to see him." Gotch was considered the "champion of champions," easily defeating the great Polish wrestler Stimilaus Zbyszko before a packed house in Chicago's Coliseum in 1910.

In 1911, anticipation was high for a rematch between Gotch and Hackenschmidt. Gotch set up a training camp by the river in Humboldt, in an area now known as "Gotch Park." Chapman writes: "A Chicago paper sent a reporter to Humboldt to watch Gotch train. The reporter saw twice the city's regular population down by the Des Moines River cheering Gotch's every move in the training camp.

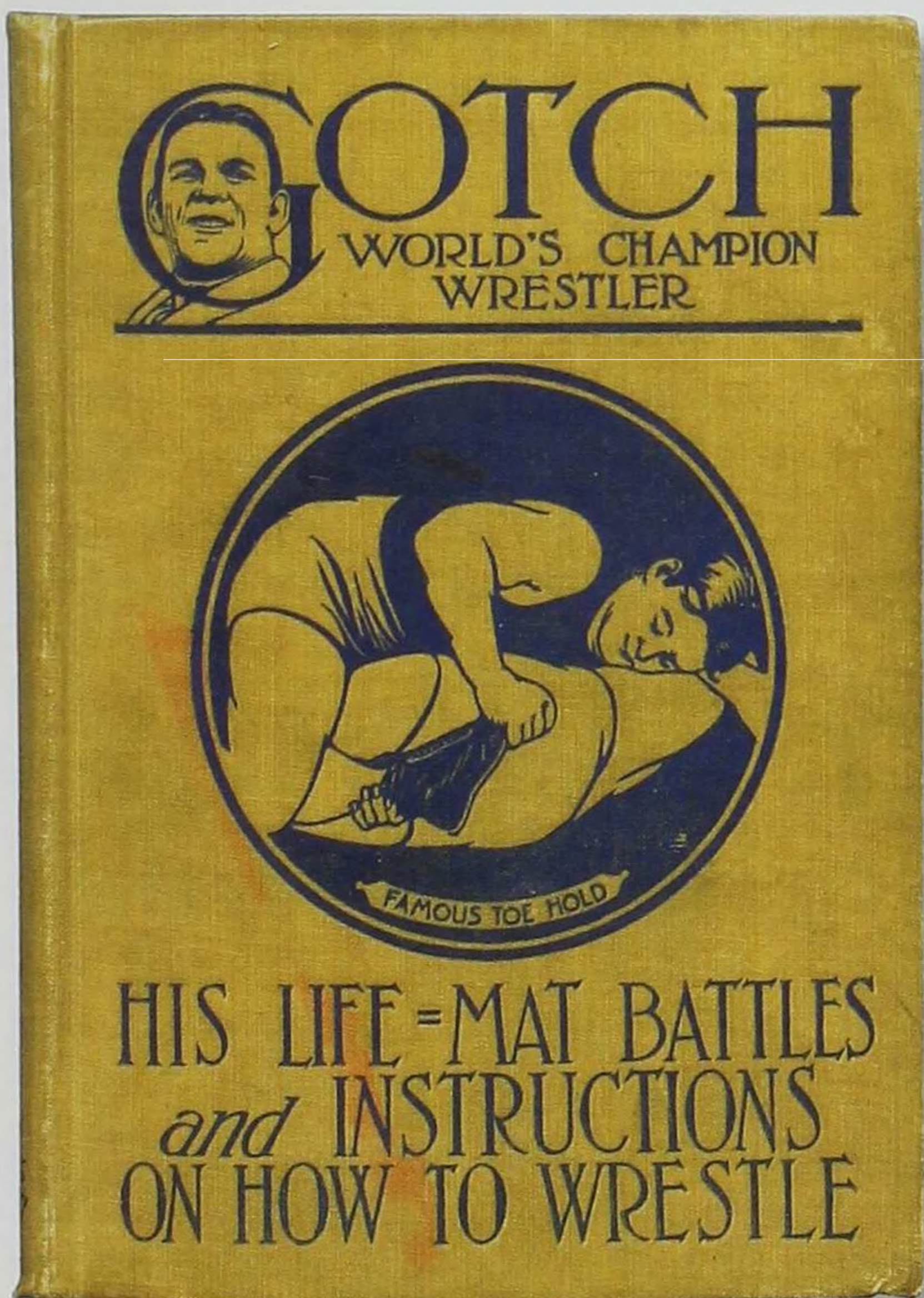
"The return bout was held in the new Comiskey Park, twenty-eight thousand attended, a record crowd for an athletic event in Chicago. [That afternoon] several thousand persons jammed the street by the Morrison Hotel where Gotch was staying and wouldn't leave until the champion made a speech. Total receipts came to \$87,953, of which \$21,000 [roughly \$460,000 today] went to Gotch for his relatively easy win."

Despite his world championship status and international celebrity, Gotch still described himself as "an Iowa farmer," and he remained in Humboldt for the rest of his life. He bought large portions of farmland and built a nice home for himself and his wife in town, as well as a new farmhouse for his folks.

At the same time that he was increasing his farm holdings and pursuing private business interests, Gotch continued wrestling for several more years before retiring as the undefeated world champion. He had lost only one match since winning his title, and had lost just twice in championship matches in his life. At his peak he went nearly eight years without losing even a single fall, let alone a match. Gotch possessed an unusual combination of tremendous strength and surprising speed and agility for a man of his size, 5 feet 11½ inches, and 212 pounds. He was known for being "amazingly fast and catlike in movements." In addition, he was a quick thinker on the mat, and diligent, seemingly indefatigable in his training. He honed his skills until he had mastered every hold, and also "mastered leverage to the nth degree."

Not long after his retirement, Gotch died at the age of only 39 in the upstairs bedroom of his house in Humboldt, on December 17, 1917. Uremic poisoning was listed as the cause of death. The event was reported in newspapers all over the country, and editorials were written in tribute to the man considered the greatest wrestler of all time. Of course, the loss was felt most keenly in Iowa, where "the whole state went into mourning," according to one editorial. Humboldt, the writer reported, completely shut down on the day of his funeral, so that the thousands of mourners could "bid a final farewell to the farm boy who had been the greatest wrestling champion in history."

Gotch's career coincided with the peak of professional wrestling as a legitimate sport in America. The start of its development separate from amateur wrestling is dated to 1888 and the founding of the Amateur Athletic Union (AAU), when weight classes were established along with rules that barred professional athletes from their sanctioned competitions. Gotch was the last clear-cut world champion, and was still considered to be so when he died. However, others claimed the title in the years following his retirement, and Gotch himself never claimed it after Earl Craddock won a title bout in the spring of 1917, several months before Gotch's death.



PHOTOS: SHSI (DES MOINES); BOOK: SHSI (IOWA CITY)

Left: "All the world admires an honest battler," wrote *Chicago Daily News* reporter George S. Robbins in his 1913 biography. "And that is why Frank A. Gotch has attracted the largest wrestling crowds in modern times [and] has done more than any other influence to make wrestling popular in America."



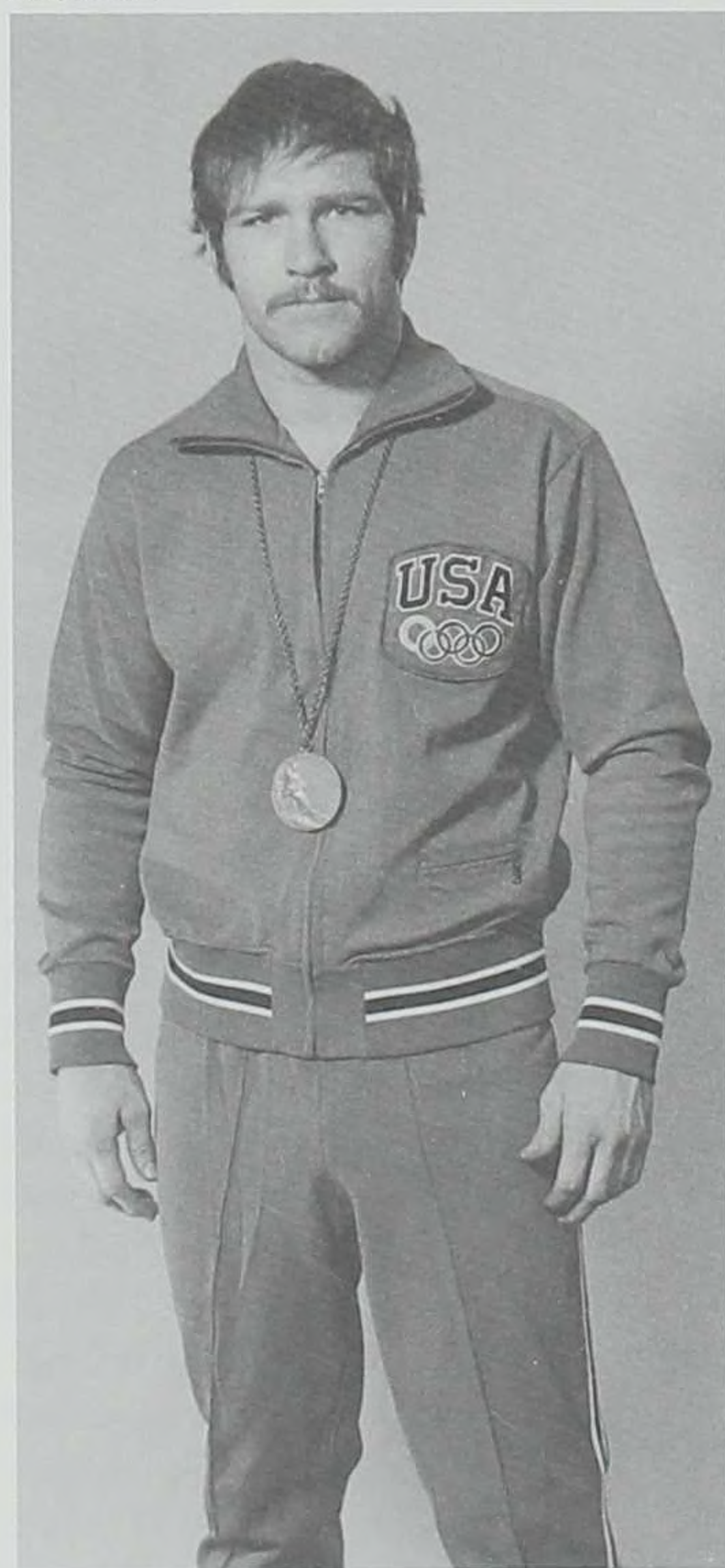
Gotch (center) masters his opponent at the Riverside Training Camp in Humboldt.

Gotch had been chief advisor to his fellow Iowan before the match and was proud of Craddock's achievements, declaring he had never seen a better wrestler in all his days of competition.

Just as professional wrestling, in the absence of clearly defined championship bouts, began to move further into the realm of theater than sport, amateur wrestling was gaining a foothold at colleges and universities. Chapman sees the particularly strong tradition of collegiate wrestling that has developed in Iowa as being directly attributable to Gotch's legacy. In sum-

ming up why Gotch deserves to be remembered for his contribution to the sport of wrestling, he explained, "For decades, his reputation hung over the land. . . . A generation of farm kids grew up wanting to be 'the heavyweight champion of the world' just like Frank and went to college and wrestled, then spread out . . . and began coaching wrestling." This tradition to which Gotch and Burns gave a strong impetus in Iowa has produced, among many other outstanding coaches and athletes, the man considered to be the greatest amateur wrestler of all time, Dan Gable. ♦

SHSI (IOWA CITY)



Dan Gable poses with his 1972 Olympic gold medal, won at Munich.

Dan Gable

World's Greatest Wrestler

Dan Gable sealed his reputation as the world's greatest wrestler by winning the gold at the 1972 Olympics at Munich, where he won six straight matches without giving up a single point. His Olympic triumph was the capstone of a remarkable career that included gold medals at both the Pan American Games and the world championships the previous year; three conference titles and two consecutive national collegiate titles; three national freestyle championships; and 100 college matches in a row without a single defeat.

Gable had come to Iowa State University an undefeated, two-time state winner for West Waterloo High School. He never lost a wrestling match until the last of his college career, a heartbreaking loss at the 1970 NCAA finals that nonetheless

strengthened his determination going into the international competitions. Gable became legendary not just for his record but for his drive and discipline, exemplified in his Olympic workout schedule that included up to eight hours of training a day.

University of Iowa head wrestling coach Gary Kordelmeier hired Gable as assistant coach in 1972. Together, they began actively recruiting for and promoting the Iowa program. By 1980, Iowa had "established a reputation as the most exciting, successful wrestling program in the United States," according to wrestling historian Mike Chapman. The tradition of excellence continued throughout Gable's 21 years as head coach, during which he coached his teams to 15 NCAA team championships before retiring in 1997. ♦

NOTE ON SOURCES

These two articles on Frank Gotch and Dan Gable are excerpts from the chapter on wrestling in "Survey of Buildings, Sites, Structures, Objects, and Districts Related to the Development of Team Sports in Iowa, 1850-1960." This statewide survey (2003) was conducted by Clare L. Kernek and Leah D. Rogers, Tallgrass Historians L.C. (with contributions by Lisa Randolph, Prairiesong Research) for Iowa's State Historic Preservation Office (SHPO). The work was funded with the assistance of a matching grant-in-aid from the State Historical Society of Iowa, SHPO, through the Department of the Interior, National Park Service.

The survey's chapter on wrestling is based primarily on wrestling historian Mike Chapman's comprehensive history, *From Gotch to Gable: A History of Wrestling in Iowa*. Chapman is editor of the *Encyclopedia of American Wrestling*; executive director of the Dan Gable International Wrestling Museum and Institute in Waterloo; and author of the new biography *The Life and Legacy of Frank Gotch* (2008).

Historic Sites in Iowa Wrestling

This state's stellar reputation in high school and college wrestling is well documented in record books and sports histories. But the story is also preserved in a handful of historic structures identified in a statewide survey. Here are three of these important structures.

► Built in 1909, the gymnasium on the Cornell College campus in Mount Vernon was the site of Cornell's outstanding wrestling program. Cornell was the first school in the nation to win National Collegiate Athletic Association (NCAA) and Amateur Athletic Union (AAU) championships in wrestling in the same year, 1974. The gym was an excellent architectural example of an early college gym in Iowa and had space for wrestling, men's and women's basketball, and swimming. Today McWethy Hall is used for art classes and studios. It is a contributing structure in the Cornell College Historic District.



◀ The remarkable wrestling program of Cresco High School qualifies its school gymnasium as historically significant. The Cresco program produced 67 individual state wrestling champions, seven team championships, four Olympic wrestlers, and seven NCAA individual gold-medal winners starting in 1922. The school won its first team state title in 1928. After this gym was built in 1936, in the Moderne style, the success of the program continued. Cresco's premier coach was George "Chris" Flanagan, whose team won 262 meets; state titles in 1948, 1958, 1960, and 1964; and 20 Northeast Iowa Conference Championships.



► The gymnasium on the Iowa State University campus in Ames was designed by the Des Moines architectural firm of Proudfoot, Bird and Rawson. Built in 1911–1913, the building is historically significant as the site of the first NCAA wrestling tournament in the nation. Iowa State's powerhouse wrestling program began in 1916 under the leadership of Charlie Mayser, who laid the foundation for the Iowa State team. The team was considered the best not just in Iowa but in the nation in the 1920s and '30s.



ALL PHOTOS FROM STATE HISTORIC PRESERVATION OFFICE



Students at Still College of Osteopathy observe a surgery, circa 1906. The medical school was on Locust Street in Des Moines.

Abraham Flexner and Medical Education in Iowa

by James Hill

Abraham Flexner was not one to mince words—not when it came to education—and the tone of his report was characteristically sharp: The four Iowa medical schools he had visited in April 1909 were all unsatisfactory. One was too small in its clinical base, two were “well-intentioned but feeble institutions,” and one

was “a disgrace to the state” and deserved to be “summarily suppressed.” The schools’ graduates, in his judgment, were ill equipped for their work and their numbers excessive for the population they served—three times as many as were needed in the state.

Such was Flexner’s dim view of medical education in Iowa, as it appeared in his report on the nation’s medical schools, *Medical*

Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching, published in 1910. But he did not single out Iowa’s schools as notably bad. They were a small part of the 155 medical schools in the “Flexner Report” and were no worse than many of the others he had investigated. Together they absorbed his public review of their shortcomings, and for many of the

lesser schools that unwanted scrutiny was the beginning of the end.

Within ten years of the report, a third of the schools written up by Flexner had closed or merged with other schools. Two of the four Iowa schools were among them, and the two that survived underwent transformations, one far more than the other. But Flexner was not yet done with Iowa. Ten years after he had stirred things up as a critic, Flexner returned to Iowa as the agent of renewal in medical education and as an important benefactor to the state. For that, Iowa's debt to Flexner continues to this day.

Flexner had arrived in Iowa as the lone agent of the Carnegie Foundation, but he symbolized a growing reform movement in medical education. It had begun in the late 19th century as an effort to bring medical training and practice up to modern standards, and as the 20th century opened, its progressive voice demanded that more be done to protect the public from poorly trained doctors and the medical diploma mills that credentialed them.

Commercial medical schools were an attractive business venture in 19th-century America; all their backers needed were a few rooms where a handful of medical men could deliver lectures on a rotating basis to students who could afford the fee. Across the country, such schools multiplied from 57 in 1880 to 160 in 1900, and Iowans saw much of this expansion as its population surged and the demand for doctors grew. Thirteen medical schools opened in Iowa in the last decades of the 19th century, from Sioux City to Keokuk, and all but two were proprietary

enterprises, privately owned and profit oriented. The State University of Iowa College of Medicine opened in Iowa City in 1870 as the medical department of the state university; in 1877, it was joined by a second state-supported medical department, later known as the Homeopathic Medical College.

Medical training in Iowa varied along with competing sects and was largely unburdened by fixed standards for licensing. That changed in 1886, however, when Iowa legislators passed the Medical Practice Act to govern medical education and practice within the state. Under the law, a Board of Medical Examiners set standards for training and ruled on whether a medical school had met them; candidates for medical licensure would either present a license from a school approved by the board or pass a board examination.

Such efforts to regulate medical education in Iowa had the effect of putting a good many commercial schools out of business. The King Eclectic Medical College in Des Moines closed in 1889, the Council Bluffs Medical College in 1895, and the Sioux City College of Medicine in 1908. Thus, by the time of the Carnegie Foundation's survey, only four medical schools remained in the state: two regular, one osteopathic, and one homeopathic.

Across the nation, other states passed their own medical licensing acts, though the requirements for that licensing varied widely. More had to be done to elevate standards across the board. In 1906, the American Medical Association responded by carrying out a critical survey of the nation's medical schools through its Council on Medical Education. The findings of its investigation were

little noted, however, owing to a claim of bias: The AMA was seen as reluctant to criticize its own members. An unbiased outsider was needed for another national survey.

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Educator Abraham Flexner, circa 1900.

Abraham Flexner was not an M.D., and he had no training in medicine. He was an educator with degrees from Johns Hopkins and Harvard whose book *The American College* had come to the attention of Henry Pritchett, president of the Carnegie Foundation. Pritchett was impressed by Flexner's critical ability and his forceful manner as a writer, and he felt that Flexner would be the ideal person for a new Carnegie project: a response to a request from the AMA to carry out a survey of the nation's medical schools.

What Flexner lacked in health care experience, he made up for

in his sound grasp of educational principles and his practical, clear-thinking, analytical mind. He also had the advantage of his employer's august name as a calling card. Because Flexner represented the Carnegie Foundation in his cross-country travels, he had doors opened to him by school officials who must have thought financial benefits would follow.

Before Flexner embarked on his travels, he had determined that the best medical education could be found at the Johns Hopkins University medical school, which was based on European scientific and clinical models. The "proper basis" of medical education, in

his view, should be grounded in the pure and applied sciences and include laboratory work, thus preparing the medical student for the clinical part of training. His vision embraced higher admission standards for students, access to a variety of cases in a modern hospital, and liberal amounts of clinical instruction. It also included a medical faculty who were full-time. Flexner knew that a survey of American medical schools would show that most fell well short of the high Johns Hopkins standard. A year of fieldwork followed.

In April 1909, Flexner visited schools in Iowa City and Des Moines. He arrived in Iowa City

in the afternoon, conducted a hurried tour of the university's College of Medicine in the company of school officials, and left the following day. At each school he visited, Flexner collected a half-dozen pieces of information, and usually he gathered them quickly: entrance requirements, student enrollments, teaching staff, resources available for maintenance, laboratory facilities, and clinical (hospital) facilities.

As one might have expected, Iowa's schools did not measure up to the Johns Hopkins standard. The opportunities for clinical teaching at the Drake University College of Medicine were "in

SPECIAL COLLECTIONS, UNIVERSITY OF IOWA LIBRARIES, IOWA CITY. PHOTO CIRCA 1905-1910



A lecturer in the University of Iowa College of Medicine holds the attention of male and female students. On behalf of the Carnegie Foundation, Abraham Flexner visited Iowa's four medical schools in 1909. None of the four met his high standards.

LEFT: SHSI (IOWA CITY), RIGHT: DRAKE UNIVERSITY YEARBOOK, 1905



Flexner inspected the College of Homeopathy in Iowa City and the Drake University College of Medicine in Des Moines.

every respect inadequate"; the laboratory facilities at the Still College of Osteopathy in Des Moines had no laboratory equipment; the clinical facilities at the University of Iowa College of Homeopathic Medicine consisted of a 35-bed hospital, "quite inadequate to its purpose"; and several members of the teaching staff at the University of Iowa College of Medicine were non-resident, with the professor of surgery based in Sioux City and the professor of gynecology in Dubuque.

In sum, Flexner found the schools falling short in one way or another, and all hobbled by inadequate clinical facilities for teaching. "Of the four medical schools in the state, none is at this time satisfactory," he wrote. Taking into account the state of medical education and the oversupply of doctors, he recommended that the two Des Moines schools cease operations. The osteopathic school, he wrote, should be "summarily suppressed," and the Drake University College of Medicine should "retire from a contest to which [it] is clearly unequal." Flexner recommended that the homeopathic school in Iowa City,

with its low attendance and meager prospects for growth, be absorbed into the university's College of Medicine, and that one school serve the medical education needs of the entire state.

The experience of Iowa's four medical schools was typical of those in other states where the scrappiest of the middling schools survived and the weak perished. The Drake University College of Medicine closed in 1913, and the University of Iowa's College of Homeopathy was absorbed by the College of Medicine in 1919. The Still College of Osteopathy survived, following reorganization in 1911. Over the years, it underwent still more organizational change, and today its descendant is the College of Osteopathic Medicine and Surgery at Des Moines University.

Flexner's impact on medical schools in Iowa was dramatic, but his recommendations to the University of Iowa College of Medicine had the most far-reaching effect on medical education in the

state. He had listed shortcomings, notably the absence of a resident faculty at the college and a shortage of clinical patients for teaching—a problem in a rural state like Iowa—but he allowed that the college could be salvaged given a full commitment to his recommended improvements and the right leadership.

This was done. Under the leadership of University of Iowa President George MacLean and William Boyd, chairman of the Finance Committee of the Iowa State Board of Education, the rescue of the College of Medicine began. With additional funding available for new hires, the college recruited an eminent physician from McGill University—answering Flexner's call for a "great clinician"—and over time succeeded in attracting other promising faculty to Iowa City. State funds were appropriated to expand medical facilities west of the Iowa River—a children's hospital in 1919 and a psychiatric hospital in 1920. And perhaps most important, state laws were passed that ensured the college would never again be short of clinical patients for teaching. In 1915, the Iowa General As-

sembly passed the Perkins Law, and in 1919 the Haskell-Klaus Law—the “indigent care laws”—granting poor Iowans, both children and adults, care in the University of Iowa Hospitals at state expense, and thus generating a steady base of patients.

It was Iowa’s good luck that after 1910 Flexner moved on from the Carnegie Foundation to a branch of the Rockefeller Foundation, the General Education Board. As a board trustee for many years, Flexner had a say in the distribution of grants to colleges and universities, and he was able to contribute to the improvement of medical education through the provision of funds for the construction of modern medical facilities and the endowment of full-time faculty positions. As Flexner recalled in his autobiography, “In less than ten years—between 1919 and 1928—operating with something less than fifty million dollars, the General Education Board added half a billion dollars or more to the resources and endowments of American medical education.”

One of those large gifts was made to the state of Iowa. In 1920, William Boyd and University of Iowa President Walter Jessup contacted Flexner with a request for a grant to help expand the university’s medical facilities.

Flexner answered quickly and with encouragement. He and Boyd had developed a warm personal friendship over the years, and he was gratified that the university had responded promptly to his earlier recommendations. He advised the men to propose something on a large scale instead of the piecemeal plan they envisioned for the medical campus. This they did.

When Flexner took the Iowa plan to the General Education Board, however, he met resistance. Board policy restricted funding to privately endowed schools; tax-supported state universities were not part of its philanthropy. It wasn’t until 1922, therefore, that the board and the Rockefeller Foundation were sufficiently moved by Flexner’s patient arguments to approve grants for \$2.25 million for the Iowa project. An equal amount was to come from the state of Iowa.

How had Flexner prevailed in the face of resistance from the General Education Board? He had convinced his fellow trustees that a “model” school in Iowa would compel other midwestern states to follow its example at their own expense, so as not to be left behind. As he later noted with satisfaction, “Within a few years Missouri, Michigan, Minnesota, and Wisconsin—all of which were far better than Iowa when our action was taken—entered into friendly

rivalry in order to create within their own states the facilities and opportunities which Iowa offered to its own youth in the field of medicine.”

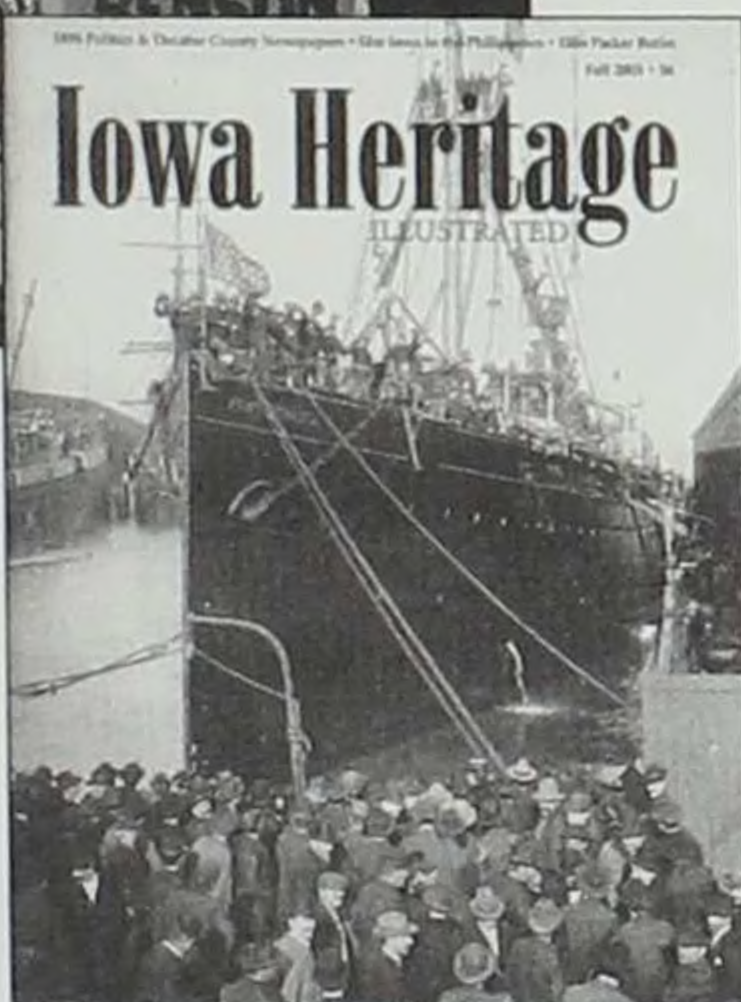
With the state portion of the \$4.5 million approved in 1923, planning began, and in 1928, the new medical campus—including a new general hospital and medical laboratories facility—was complete. It was a campus in which all Iowans could take pride. What had begun 18 years earlier as a desperate effort to save the College of Medicine from collapse had succeeded beyond the wildest dreams of anyone. Over the next 80 years, it grew out from that central core and today stands as a medical center with a national reputation in cutting-edge health care and research. For that remarkable rise from the dismal prospects of 1910, a nod of thanks is owed the man from the Carnegie Foundation who had stepped off a train in Iowa some years before and started a shake-up of medical education in the state. ♦

James Hill became acquainted with the Abraham Flexner story while researching the history of the University of Iowa Hospitals and Clinics for a book-length project. His interest in Flexner remained long after the project was completed, and this article is the result of his further research. Hill works at Pearson in Iowa City and lives in Coralville.

NOTE ON SOURCES

I would like to thank the staffs of the University of Iowa Archives and the State Historical Society of Iowa for their assistance with my research and for their helpful suggestions. Among the sources I used for this article are: Lee Anderson, “A Great Victory: Abraham Flexner and the New Medical Campus at the University of Iowa,” *Annals of Iowa*, 51 (Winter 1992); Thomas Bonner, *Iconoclast: Abraham Flexner and a Life in Learning* (Baltimore: Johns Hopkins University Press, 2002); Abraham Flexner, *Abraham Flexner: An Autobiography* (New York: Simon and Schuster, 1960); Abraham Flexner, *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching*, Bulletin No. 4 (New York: Carnegie Foundation for the Advancement of Teaching, 1910); John Gerber, et al., *A Pictorial History of the University of Iowa* (Iowa City: University of Iowa Press, 1988); Mark Hiatt, “The Amazing Logistics of Flexner’s Fieldwork,” *Medical Sentinel* 5:5 (2000); Susan Lawrence, “Iowa Physicians: Legitimacy, Institutions, and the Practice of Medicine,” *Annals of Iowa* 63 (Winter 2004); Samuel Levey, et al., *The Rise of a University Teaching Hospital, A Leadership Perspective: The University of Iowa Hospitals and Clinics* (Chicago: Health Administration Press, 1997); Stow Persons, *The University of Iowa in the Twentieth Century: An Institutional History* (Iowa City: University of Iowa Press, 1990); Paul Starr, *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry* (New York: Basic Books, 1982); and Steven Wheatley, *The Politics of Philanthropy: Abraham Flexner and Medical Education* (Madison: University of Wisconsin Press, 1988).

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Naval signalmen will recognize this device as a training wheel for semaphore positions. Semaphore is a method of communication utilizing the positions of two distinct flags (each red and yellow) to convey a message, letter, or number over distance.

Originally developed in the 18th century as a mechanical device, the technology soon was adapted to flags and became a daylight method of communication for ships, while a blinking light served in the nighttime. Today naval signalmen still train to use the semaphore.

During the Civil War, the United States Army began using a similar system, which was developed by General Albert Meyers. Known as the "Wig-Wag" system, it used two flags, one red and one white, with center squares in opposite colors.

—Bill Johnson, curator



SHSI (DES MOINES): 1946 DES MOINES REGISTER AND TRIBUNE



After a major fire in the Gilmore City school, the wrestling program was shifted to the lower level of a barn. Overseeing practice is coach Hugh Linn, former Olympic wrestler. Iowa's tradition of wrestling is featured in this issue.

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