PALIMESEST

Volume 75, Number

IOWA'S POPULAR HISTORY MAGAZINE

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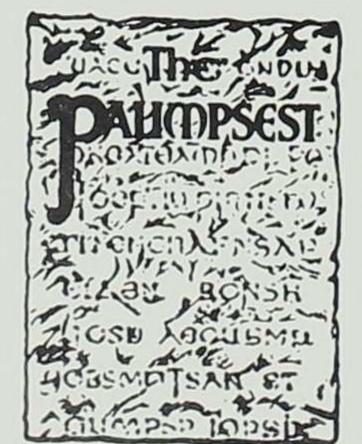
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Four miles south of Spirit Lake, a freight train pauses at Arnolds Park, en route to Spencer, Rockwell City, Jefferson, and its ultimate destination, Perry, in 1952. The Spirit Lake station was the first of several stations at which *Palimpsest* author Robert L. Dyson worked in the 1940s. In this issue, he recounts the demands of working as a station agent and telegrapher during the early 1940s.



The Meaning of the Palimpsest

In early times a palimpsest (pal'/imp/sest) was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete, and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the record of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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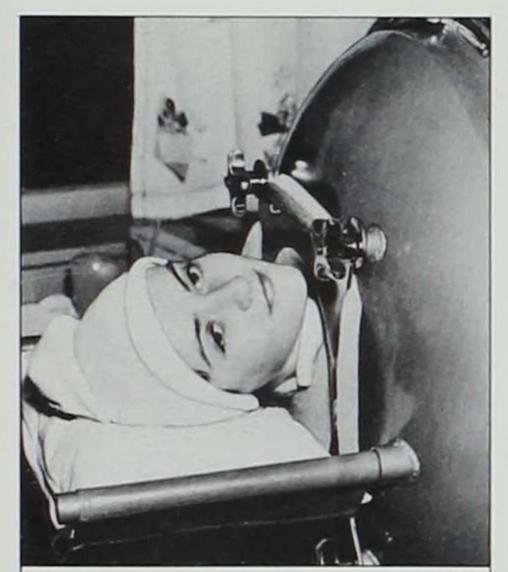
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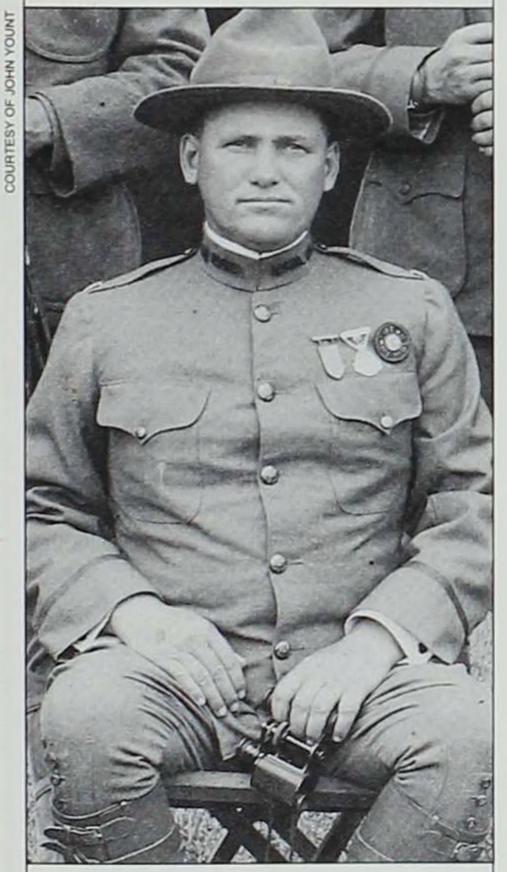
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Facing polio





Brookhart's crusade

30

FRONT COVER: Telegraph equipment, timetables, and other items vital to railroad work. Curious about the red Prince Albert can? An empty tobacco can amplified incoming Morse Code for a telegrapher working in a noisy depot. For more on railroads, turn to page 16. (Photographed by Mike Whye in the former Rock Island depot in Council Bluffs; our thanks to Marcia Hastings and the RailsWest Railroad Museum, Council Bluffs, and to Robert L. Dyson)

The

PALIMPSEST

IOWA'S POPULAR HISTORY MAGAZINE

Ginalie Swaim, Editor

VOLUME 75, NUMBER 1

SPRING 1994

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The Iron Lung as History

a curator's thoughts

by Jack Lufkin

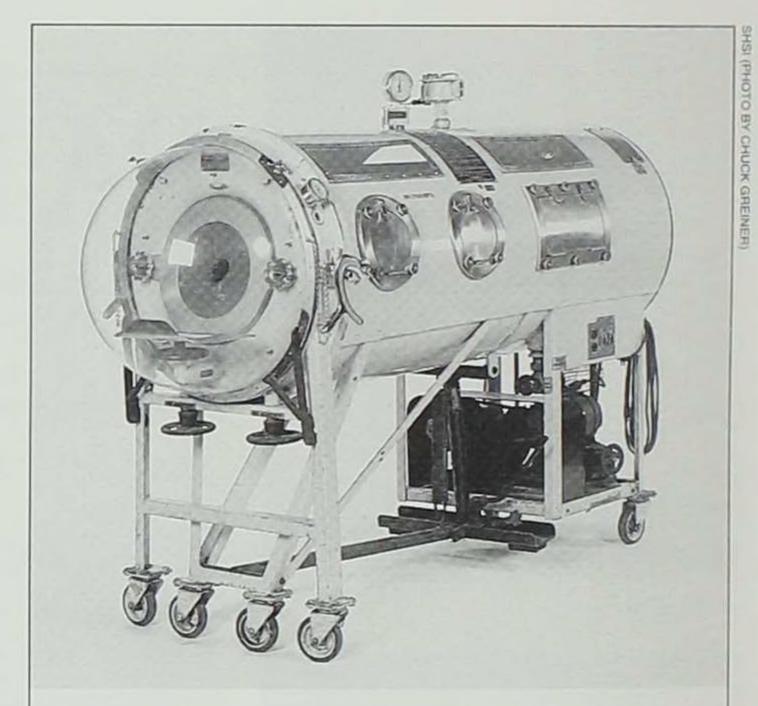
Note: Every year the State Historical Society adds hundreds of items to its historical collections to help document Iowa's past. One of these items evoked a particularly strong personal response in curator Jack Lufkin. Here he shares his thoughts with *Palimpsest* readers.

—The editor

friend Don recently told me a childhood story from the 1950s in Iowa. One day Don felt ill. He collapsed, and his mother rushed him to a clinic. As the doctor examined the boy's legs, Don offered his own emotional diagnosis: "I've got polio." Luckily, Don was wrong. But it was not an unlikely thought to enter a boy's mind in the 1950s. The threat of polio was terrifying and real. And one treatment conjured up a frightening mental image. People whose breathing muscles were paralyzed by polio were sometimes placed in "iron lungs," large metal cylinders used for artificial respiration.

A few years ago, someone offered to donate an iron lung to the State Historical Society of Iowa for the museum collection. One hot summer afternoon, chief curator Michael O. Smith and I drove out of Des Moines to meet the potential donor and to look at the iron lung.

The iron lung rested quietly among other



This iron lung, used in Des Moines in the 1950s polio epidemic, was recently donated to the State Historical Society of Iowa by Gerald Angove.

miscellaneous stuff in a storage building. The donor offered to turn it on, and we found that it still worked. The machine hissed and puffed into life. I had never seen or heard one operating before. Its steady, somewhat ominous sound was unforgettable. At that moment the reality of Iowa's polio epidemics hit me full force—polio was one scary disease.

Poliomyelitis (or polio) is a viral disease that periodically surged through America during the early and mid-twentieth century. Although it is primarily a childhood disease (earning the name of infantile paralysis), it also affects adults. Franklin D. Roosevelt was diagnosed with polio when he was thirty-nine. The disease attacks the nervous system and impairs muscle groups (Roosevelt, for instance, lost mobility in his legs). Sometimes the breathing muscles are paralyzed, and without the help of a mechanical respirator (temporarily or for a lifetime), those with severe cases of polio may well die.

The iron lung was invented in 1928. By means of a bellows underneath the cylinder, the air pressure inside the cylinder compresses and expands the chest—in essence, pushing air out and pulling air into the lungs. The person's head rests on a flat surface outside of the cylinder. Mirrors help one see around the room. Iron lungs were used widely through the mid-

Epi Iow 1950s. But they were often in short supply, and other, simpler methods were developed for helping patients to breathe. Yet as recently as 1985, at least three hundred iron lungs were still in use in America, mostly for individuals

with postpolio disabilities.

The iron lung pictured here, now in the Society's collections, performed its life-saving work in the early 1950s at Iowa Lutheran Hospital in Des Moines, where the Kenny Clinic opened in 1942. The clinic was America's first private-hospital polio treatment clinic. It was named for an Australian nurse, Sister Elizabeth Kenny, an international pioneer in polio research and treatment.

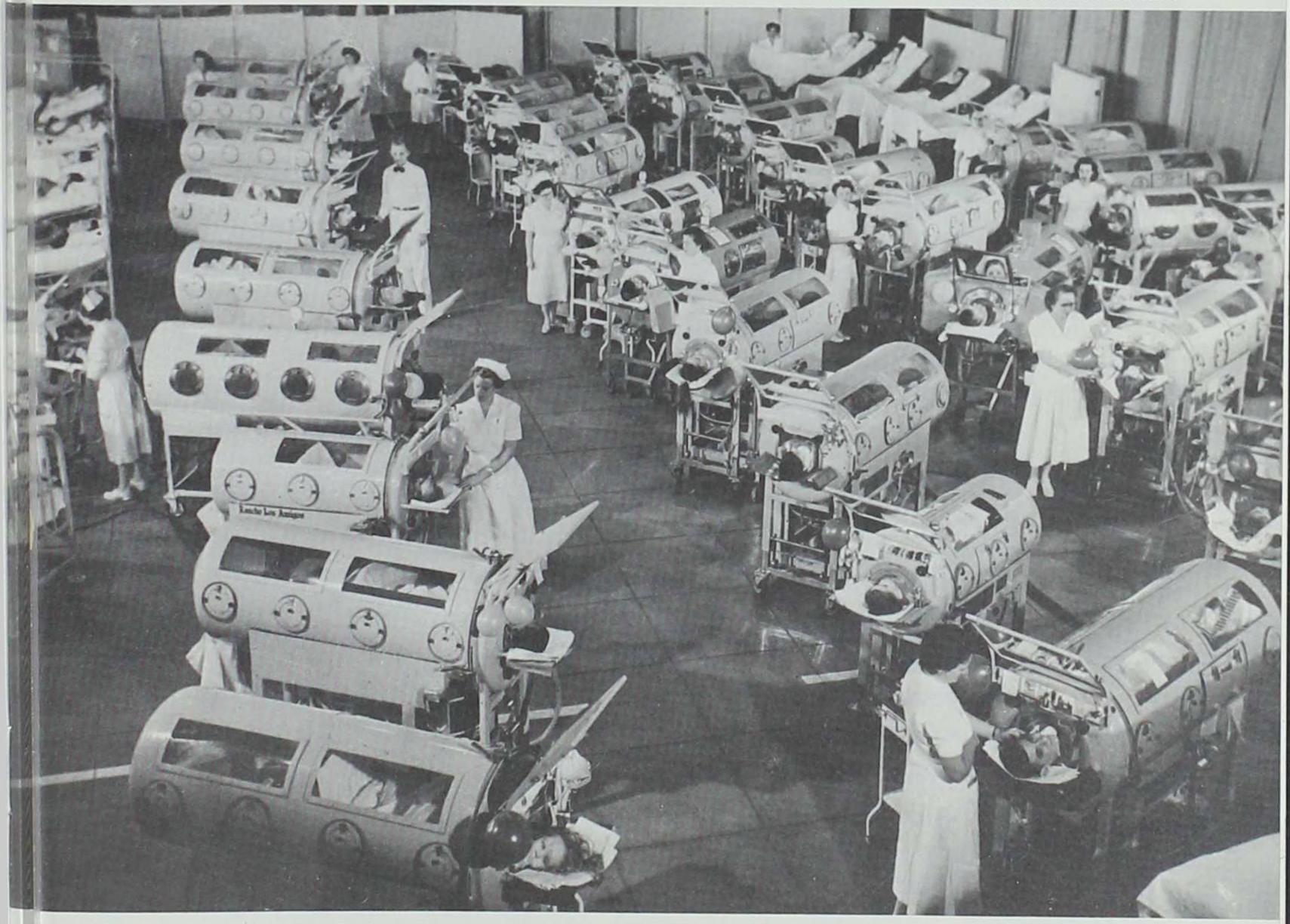
Like my friend Don, I also have childhood

memories related to polio. I remember lining up in a public school to be given a pink sugar cube treated with the oral vaccine. By the mid-1950s the Salk vaccine, and later the Sabin vaccine, would mean that the second half of the baby-boomer generation would largely escape the threat of polio. But for those born earlier, the iron lung remains a powerful reminder of Americans' fight against polio epidemics.

For a close-up look at the iron lung, visit the Society's museum exhibit "We've Gotcha Covered: The Iowa Insurance Story," on the second floor of the State Historical Building in Des Moines. Iron lungs represent an early and costly treatment encountered by a young health-insurance industry.

(For more about polio, turn the page.)

COURTESY WARREN E. COLLINS, INC., OF BRAINTREE, MASSACHUSETTS



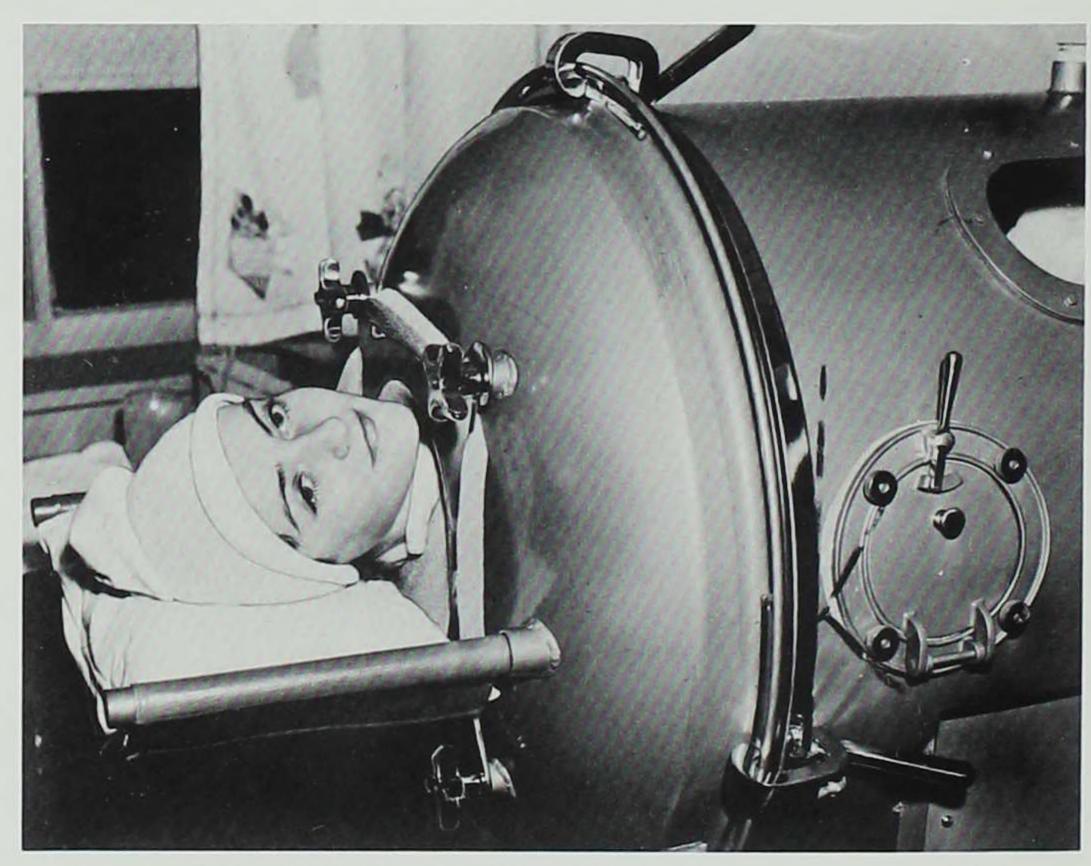
Epidemic proportions of polio become clear in 1950s photo of the Los Angeles County Hospital. As in California, Iowa's need for iron lungs and other treatments rose in the late 1940s and early 1950s.

An Iowa Polio Portfolio, 1939 to 1959

Polio was not new to Iowans of the 1950s. In 1910, Iowa had reported 565 cases—a hundred more than in 1951. Polio seemed to strike every few years in Iowa, with usually 170 to 220 cases. But by the 1940s the numbers began to climb dramatically.

While Iowa health department reports give us the statistical dimension of the epidemics, historical photographs provide the human dimension. The following photos from the *Des Moines Register and Tribune*, 1939 through 1959, put a human face on the disease and reflect the nation's hope that polio would indeed be conquered, by medical treatment and by the human spirit.

—The Editor



November 1939: One Friday, nineteen-year-old Florence Stumbo, a student nurse at Mercy Hospital in Des Moines, was diagnosed with polio. Typically, the symptoms progressed quickly: by Sunday she was in an iron lung. By Tuesday her condition was "much improved." The city already had four iron lungs; this one, at Broadlawns Hospital, was bought by the Des Moines Business and Professional Women's Club.



September 1940: Nurse Ruth Swanson and Dr. E. K. Vaubel take blood from Robert Harrell of Winterset. The blood, from donors who showed signs of paralysis from polio, would be used to make serum. Donors from Winterset, Indianola, Ames, Van Meter, Knoxville, and Des Moines gathered at a clinic set up in the Des Moines city hall. In 1940 the number of polio cases was a record high for Iowa—927. Sixty-four Iowans would die from polio that year.



January 1943: Two-year-old Michael R. Sullivan is distracted by a hefty book while receiving treatment to ease muscular pain. A moist, woolen hot pack was applied to his leg at the Kenny Clinic in Iowa Lutheran Hospital in Des Moines. Sullivan had had polio since he was six months old, and was now learning to walk without a leg brace.



February 1947: Albert Hook, an employee at Miller's Dry Cleaning Plant in Des Moines, adds to a polio fund basket started by co-worker Nick Critelli. The sign reads "YOU MAY BE NEXT SO GIVE \$." By 1947 the number of cases had dropped to 176, but the next three years would see an alarming rise—an average of 1,300 cases yearly.



January 1948: After nine months at the Kenny Clinic in Des Moines and a recent fitting for braces, Joanne Clark could now "walk a little." Here she shows painted plastic birds she made at the clinic to Municipal Judge Ralph D. Moore. Moore brought good news for the seven patients at the cottage: his Moose lodge had already collected \$102 in its polio fund. Nationally, more good news would come next year: three doctors at Harvard Medical School would grow the polio virus in human and monkey tissue, work that would earn them the Nobel Prize in 1954.



February 1951: Five-year-old David Rathjen practices climbing with physical therapist Mrs. J. C. Sullivan. The Des Moines Railway Co. had donated the "bus steps" to Blank Memorial Hospital in Des Moines.



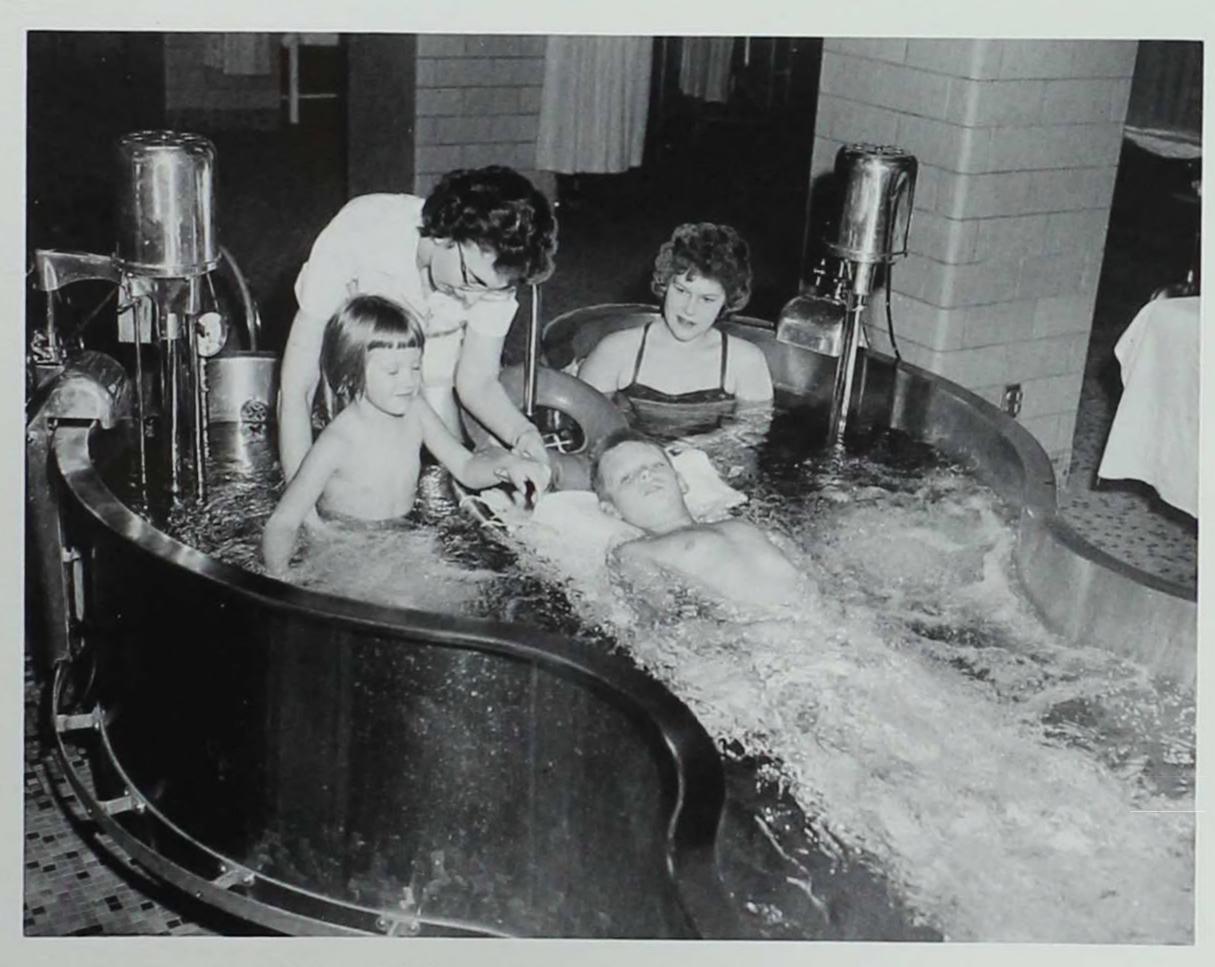
June 1951: A young girl at the Kenny Cottage receives a woolen hot pack. When the virus invaded the nervous system, it caused headaches, stiffness, and in severe cases, paralysis. Milder cases were marked by sore throat, low fevers, and gastrointestinal upset—symptoms common to many less worrisome diseases.



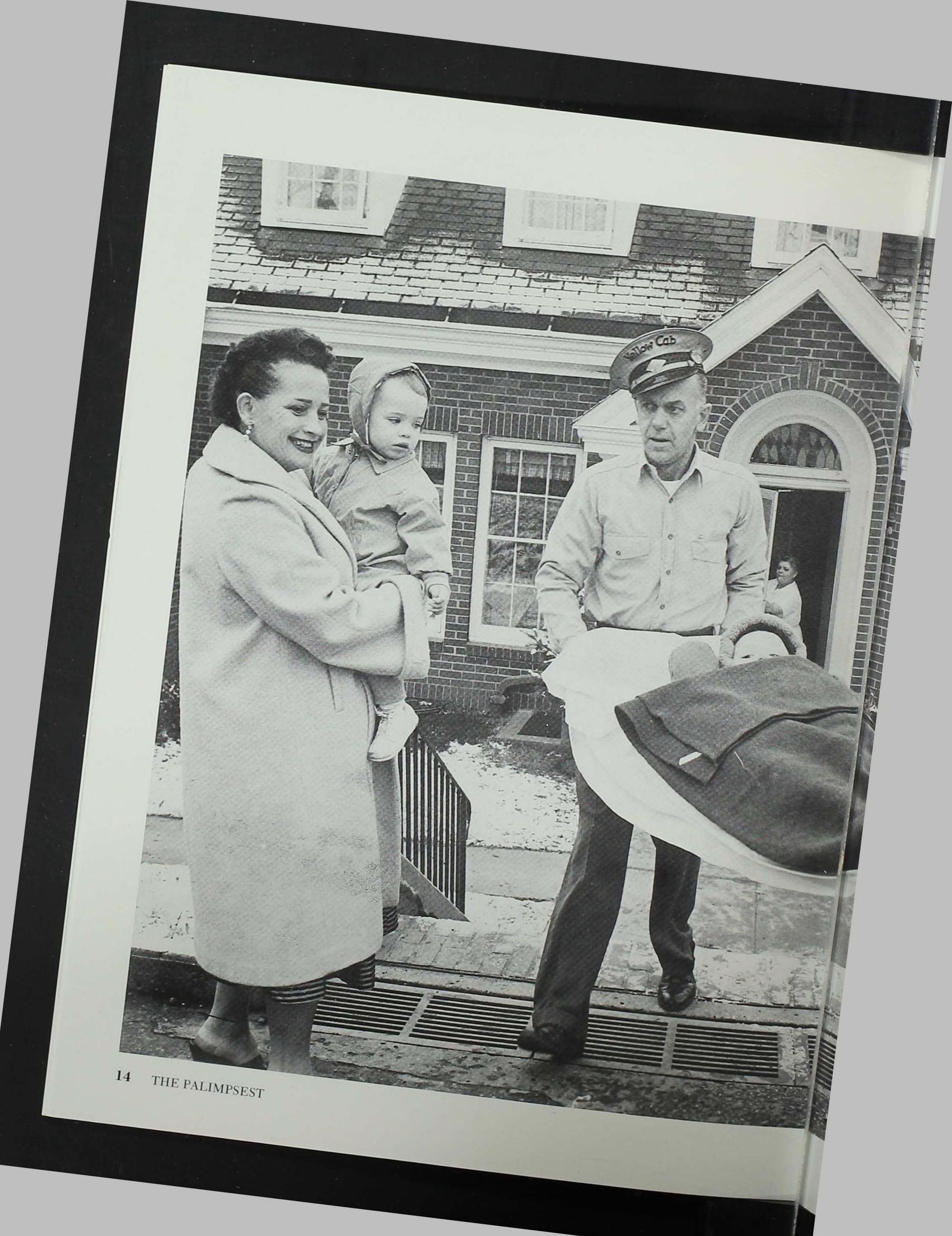
August 1952: Bernice Burris reaches into an iron lung in the polio ward at Broadlawns Hospital in Des Moines. Meanwhile, Sioux City had become one of the first national test sites for a gamma globulin vaccine. Twenty-one doctors and nurses arrived in July to begin inoculating 16,500 children in Woodbury County and neighboring Dakota County in Nebraska. Iron lungs were flown into Sioux City, and entertainer Bob Hope arrived for a benefit fund-raiser and visits to hospitals.

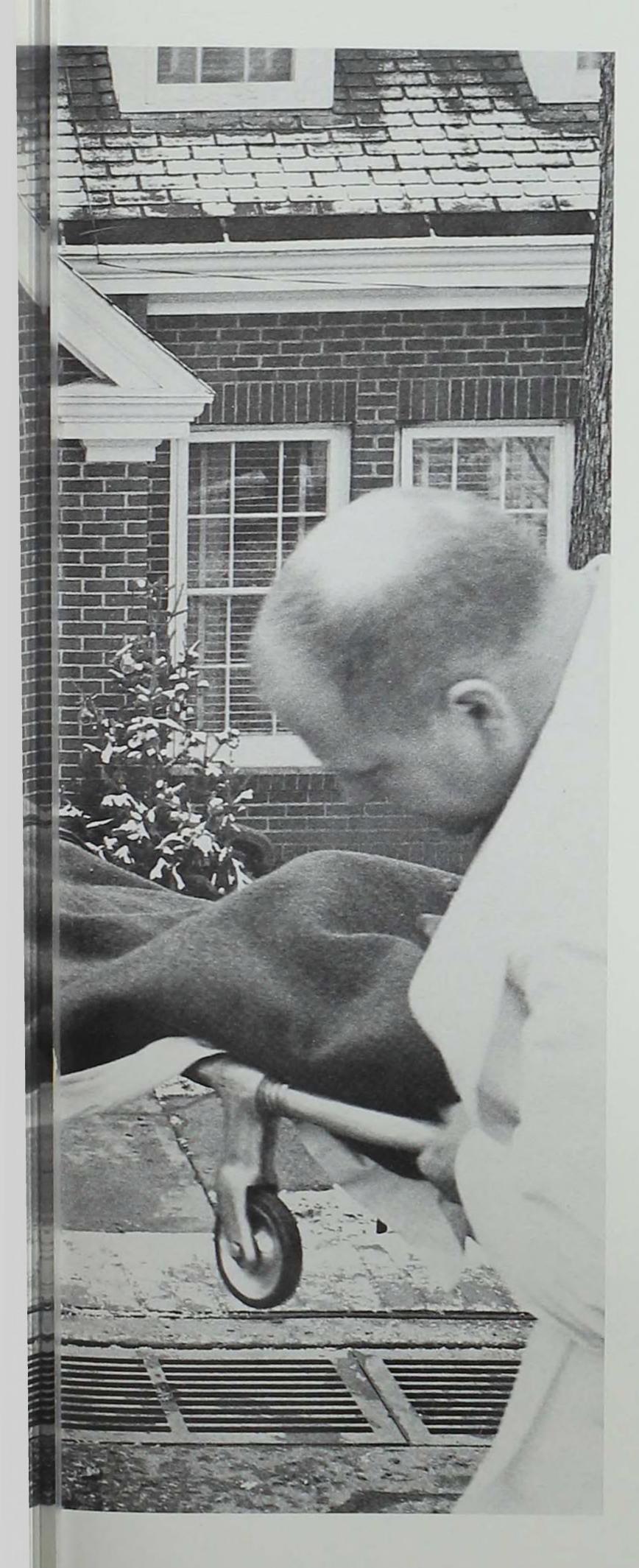


November 1952: Seven children with polio celebrate a birthday at Iowa Lutheran Hospital in Des Moines. Polio cases in Iowa would peak that year—at 3,564 cases reported, and 163 deaths. Sioux City alone had 923 cases. Parents kept their children away from swimming pools and other public places. Even sending one's child to school seemed risky.



August 1959: Siblings Reva, Laverne, and Elaine Briggs from Villisca receive physical therapy at the Younker Memorial Rehabilitation Center in Des Moines. Mary Bellas, standing, was one of four registered physical therapists sent to Des Moines. Although therapy and rehabilitation continued for those with postpolio disabilities, a vaccine was now available. In 1955 Congress had allocated \$30 million to help states buy the Salk vaccine, and the number of Iowa cases plummeted—from 1,445 in 1954, to 580 in 1956, to 78 in 1957.





December 1959: Ten-year-old Hal Richard Bowers heads home from the Junior League Home for Convalescents in Des Moines. In 1962 the more effective Sabin vaccine would supplant the Salk vaccine. By 1965, the number of cases would decline to 72 nationally. The epidemic was over.



December 1959: Ten-year-old Hal Richard Bowers heads home from the Junior League Home for Convalescents in Des Moines. In 1962 the more effective Sabin vaccine would supplant the Salk vaccine. By 1965, the number of cases would decline to 72 nationally. The epidemic was over.

Cleaning the Fires and Working the Wires

From Railroad Engine Watchman to Station Agent-Telegrapher in 1940s Iowa

by Robert L. Dyson

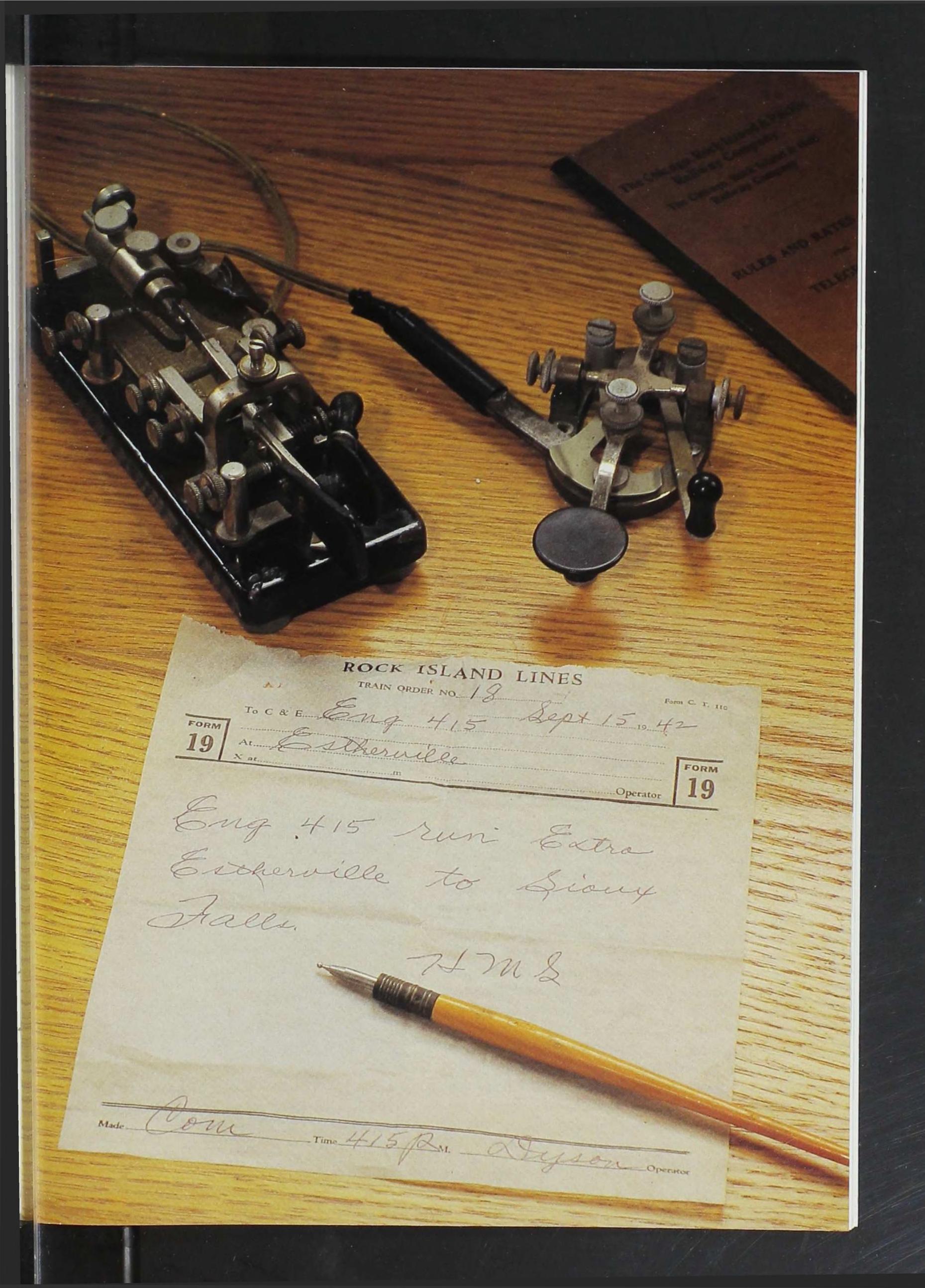
ERHAPS I CAME BY IT naturally—this great love of mine for railroading and telegraphy. I was born in 1922 in a house adjoining the railroad right-of-way and directly across the tracks from the depot at Adel, Iowa. There my father was the "second-trick" (second-shift) telegraph operator for the Milwaukee Railroad, which ran from Des Moines to Spirit Lake and the Iowa Great Lakes Region.

One of my first memories of railroading was of standing on the brick station platform along-side several rotund traveling salesmen with heavy sample cases and trunks. We were watching the passenger train from Des Moines come charging into town, pulled by what seemed to be a monstrous steam locomotive. Huffing and puffing, it belched huge clouds of black smoke and spit out white steam. Its brass bell clanged and its steam whistle shrieked. One of the

salesmen mentioned that locomotives sometimes blow up.

As I was only four years old, this was frightening indeed. Nevertheless, as I grew up, I would become accustomed to monstrous locomotives, and even fond of them. And a depot would seem like a second home to me. In fact, when my father, Harvey Bryan Dyson, was appointed to the position of agent-telegrapher at Spirit Lake in the spring of 1937, our family lived in the depot. As part of his salary, the railroad provided living quarters on the second floor. My parents, we three children (ages sixteen, fifteen, and eight), and within two years a baby sister, all lived in four rooms. The living room, kitchen, and two bedrooms were fairly typical for agents' quarters. The apartment had

Right: Train orders and telegraph equipment dominated the life of station agents and telegraphers.





The Milwaukee Railroad depot in Adel in the early 1920s. Author's father, H. B. Dyson (left), was the telegrapher. He poses with station agent Mr. Case (center), and the mail messenger. For a contemporary view of the Adel depot, see back cover.

no running water, and Dad paid out of his pocket to pipe in water and build a bathroom upstairs. He also got permission to partition off half of the big waiting room downstairs, and out of that we fashioned an extra bedroom and a room where my mother, Sylvia Dyson, could do the wash.

Raising a family in a depot could be dangerous and noisy, but our situation wasn't as bad as some. Ours was a small terminal at the end of a line, so there were no high-speed trains going through in the middle of the night. The biggest inconvenience was for my mother on wash day. When a steam engine sat overnight in the station, condensation would build up in the smokestack. Then, when the engine started up, soot and smoke poured out, and particles clung to Mother's wash drying on the line. So her laundry schedule had to concede to the train schedule.

After graduating from high school in 1939—and obviously with no little influence on the part of my father—I was appointed to fill a vacant position of engine watchman. Six days a week, shortly after 1 P.M., the little passenger train from Des Moines pulled into Spirit Lake. Although larger engines were sometimes assigned to pull the two-car train, I was most pleased when one of the small Atlantic-class engines (either Number 25 or 27) proudly charged into town at the head of the train. It

was easy to recognize these smaller locomotives by their tall smokestacks and six-and-a-half-foot driving wheels. They were my favorites.

In fact, during my brief training period as engine watchman, I developed a real affection for all locomotives. They sometimes seemed like living creatures to me. The blazing coals in the firebox gave them the warmth of life; the incessant thumping of the air pump was the heartbeat; and their huffing and puffing while in motion was labored breathing. And at the end of a busy day's work, a locomotive needed rest and attention. That's where I came in.

But first, after the passengers detrained and the mail, baggage, and express were unloaded, the train proceeded another block and a half to the turntable, where the engine would be uncoupled and turned around for its return trip to Des Moines later that day. The turntable was a short stretch of track that bridged over a shallow pit surrounded by a circular wooden catwalk. The locomotive was properly balanced on the turntable, which was then rotated above a center pivot by manually pushing on handles extending over the catwalk at each end. Despite the weight of the locomotive, this could be accomplished by one person alone; more often, two or three manned the handles. Larger terminals used electric motors on the turntable. The mail-baggage-express car and the coach were then switched, end-for-end, so that the coach was in the trailing position. After parking the train on the side track next to the



The two-car passenger train that arrived at Spirit Lake daily was often pulled by Engine No. 25, one of the small Atlantic-class locomotives.

main line, directly in front of the depot, the engine was uncoupled and turned over to me.

As a seventeen-year-old, I was exhilarated by its power. As I placed the "Johnson Bar" (reverse lever) in the forward position, released the air brakes, and eased out on the throttle, I could feel the iron behemoth surge forward.

Upon reaching the servicing area I would begin a series of tasks to ready the locomotive for the return trip. First, I would open the ashpan doors, release the accumulated ashes, and shake one or more sections of the grates to dump at least half of the hot coals from the firebox, thus getting rid of the build-up of clinkers and ashes. Then I shoveled a layer of coal onto the bare grates through the hinged "butterfly door," and with a clinker hook pulled hot coals from the old fire onto the fresh coal to make a clean, new fire. I turned on the blower, to force steam up the stack and provide a draft in the firebox. Once the remaining grates were dumped and covered with new coal, and the ashpans cleaned, I pulled the locomotive forward and shoveled the hot ashes from between the rails. I filled the lubricator with oil, to be turned on to provide lubrication for the cylinders and air pump on the return trip. I also greased the side-rod bearings until the heavy grease squished out from around the bearings. Finally, I backed the locomotive across the street, coupled it to the train, and connected the air, signal, and steam hoses to the cars.

One hot summer day I was ready to back the locomotive into the train when my girlfriend, who had borrowed my 1928 Model A Ford coupe, drove up and parked on the street parallel to the tracks, on the fireman's side of the locomotive. Facetiously I suggested that we race the block and a half to the highway. Not one to decline a challenge, she readily accepted. I switched on the air valve so the bell would ring continuously, and the race was on. The car was hidden from my view by the locomotive tender, but I assumed that upon reaching the highway, my girlfriend would stop and wait for me and my charge to cross.

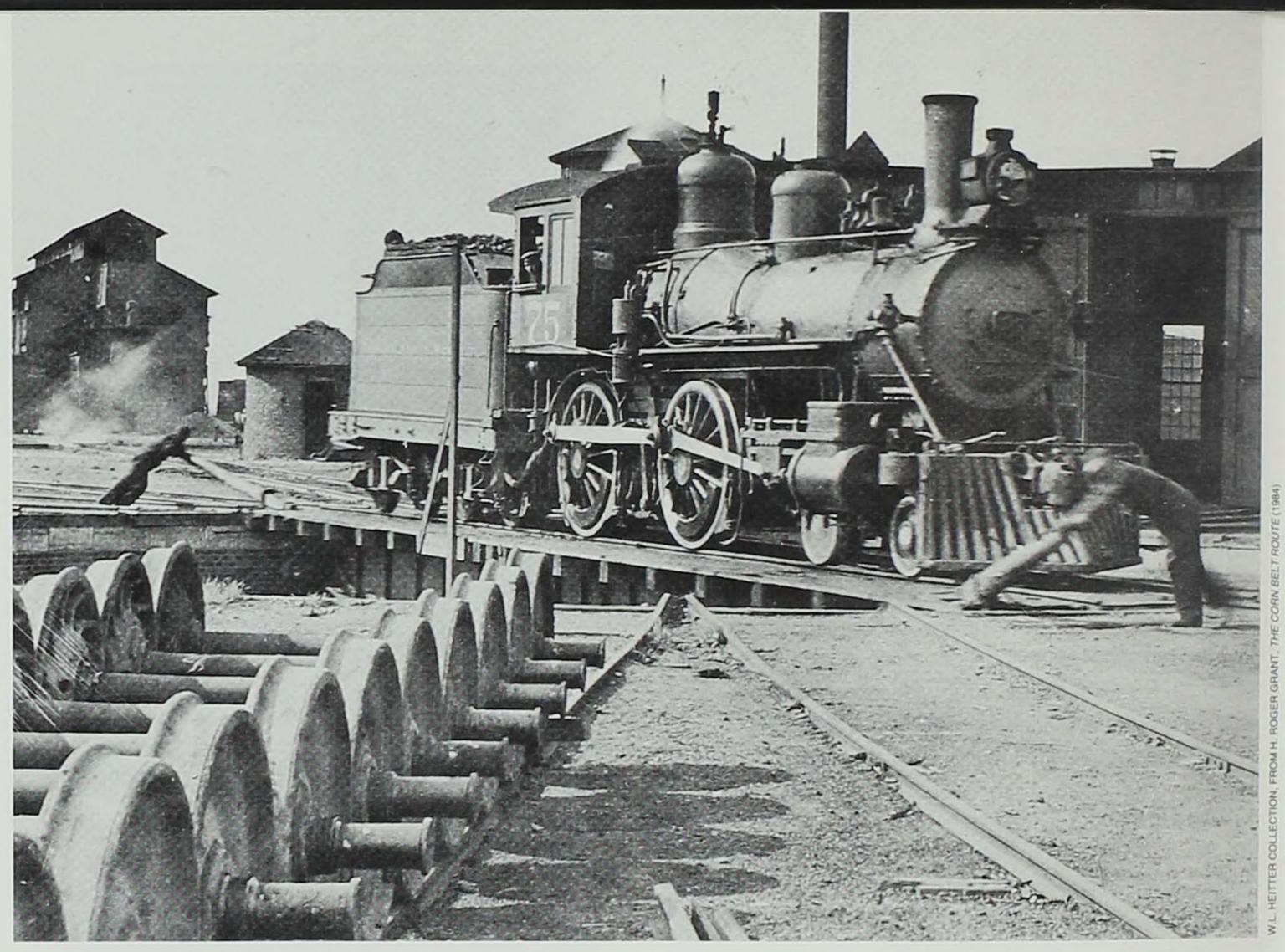
Seeing no approaching cars on the highway, I widened on the throttle and the engine responded magnificently. Imagine my surprise then, when my little automobile and its tri-



In his first railroad job, the author (left) was engine watchman at Spirit Lake, where his father, H. B. Dyson (right) was the agent-telegrapher. The bay window behind them was a standard feature on many depots, because it provided an unobstructed view of the tracks and incoming trains. The Dyson family lived on the second floor of the depot. For a recent view of the Spirit Lake depot, see the back cover.

umphantly waving driver suddenly shot into view and scooted down the highway just ahead of the approaching tender! The race belonged to my girlfriend that day.

Before the trip back to Des Moines, the locomotive would need only my occasional attention to maintain a low fire and monitor the water level. This last part was vital. If the water level dropped below the boiler crown sheet,



Long levers on hand-powered turntables allowed one or two workers to rotate a locomotive to reverse its direction on the track. Here, the Chicago Great Western turntable and roundhouse, Clarion, Iowa, about 1909.

above the firebox, the metal would heat up quickly. Then when cold water hit the crown sheet, the steam could expand so suddenly that the boiler could explode, taking much of the locomotive with it. By the 1940s such accidents were rare but not unheard of; on August 25, 1873, a locomotive boiler had exploded near Atlantic, Iowa, instantly killing nineteen-year-old head brakeman James Dyson, my great-great uncle. The explosion threw metal fragments a quarter of a mile away.

My other chores included sweeping and cleaning the coach, turning the seats for the return trip, and adding ice to the mail car's drinking-water tank. I also turned the mail hooks so that mail bags could be snatched on the fly from fixtures at wayside stations (the mail would be sorted by clerks on the moving train).

By the time the train crew came back on duty a half-hour before the 6:05 P.M. departure, I had ensured that the fire covered the entire grate area and was just hot enough to keep the steam pressure slightly under the engine's

working pressure so that the safety valve wouldn't continually pop off. Then I went inside the depot, typed freight bills, sold tickets, and checked baggage.

The freight locomotive that arrived in Spirit Lake each afternoon or evening required similar servicing, but because the return trip wasn't until the next morning, either the fire was "knocked" (extinguished), or a low fire maintained through the night, depending upon the temperature. Fortunately, Spirit Lake had built a one-stall "roundhouse," or engine house, just before the devastating blizzard of Armistice Day, 1940. The storm blew in out of the northwest and began with a downpour. As the temperature fell sharply and the wind increased, the rain changed briefly to sleet, and then to snow, resulting in a blinding blizzard. I was at the depot when the full fury of the storm hit. Heavy snow and severe winds blasted and rattled the windows with a vengeance. The sturdy old structure shuddered and groaned.

My job was to care for the freight locomotive two blocks away in the roundhouse, and so I headed out into the storm. The driven snow stung my face, and the cold wind penetrated my thick clothing. It was impossible to breathe while facing into the wind, or even to see, for that matter. Visibility was absolute zero, with drifts piling up. I turned from the wind and struggled backwards down the tracks, and I was mighty thankful when I finally succeeded in reaching the sanctuary of the roundhouse. In its shelter, the locomotive's fire could be banked through the night so it wouldn't freeze up.

The engine watchman's job was interesting, and the pay was good: \$100 monthly for a six-day work week during the summer, and \$116 in the winter when I added Sundays. I worked from 9:00 A.M. until 9:00 P.M., with two lunch periods. But the job was dirty and sometimes frustrating. In winter, snow would blow into the ashpan, melt, and then congeal with ash into a

huge, frozen clinker that jammed the ashpan. It was a struggle to get the ashpan doors open and to break up the clinker with a large, heavy bar. The time finally arrived when I decided that I should consider another line of work. But what did I want to do?

College, perhaps? I had little incentive to pursue a degree when the country was just emerging from a major depression. Stories abounded of recent college graduates unable to find employment. Of course, there was the question of money, too, and the frequently heard advice to "Learn a trade!"

But something else continued to tug at me—these were still the exciting "romance days" of railroading. The adventure of travel and the camaraderie of railroad workers attracted many Americans. Train engineers had a certain heroic stature, and growing up to be an engineer was still a common childhood dream. I had

COURTESY WM. W. KRATVILLE, OMAHA, NEBRASKA (1952)



Freight locomotive 1275 emerges from the engine house and passes across the manually operated turntable (Spirit Lake, 1952). During Iowa's cold winters, engine houses provided welcome shelter for engine watchmen banking the fires in locomotives.



The clutter of the office in a small-town railroad station is readily apparent in this World War I era photo of station agent in foreground (a Mr. Tounnell), his sons, and a family friend. The image was likely taken in the Chicago Great Western Railway depot at Dunkerton, Iowa. Despite technological changes in the coming decades, the demands on station agents and telegraphers would continue.

served as a temporary locomotive fireman when the regular man had been delayed. Perhaps if I hired out as a fireman, I might some day be promoted to engineer.

On the other hand, the romance associated with being a telegrapher also enticed me. A railroad magazine that I subscribed to carried adventure stories about "boomer" telegraphers, itinerants who worked for short periods for first one railroad, then another. Being single, boomers were willing to trade job security for seeing the country. That sounded exciting. Besides, it seemed only natural to follow in Dad's footsteps as a telegrapher.

Although many people enrolled in telegraphy schools (which were often connected with business colleges), just as many learned it on their own or by helping out in depots. I had spent much of my childhood in a depot, watching my father work. He had even given me a practice

telegraph set years ago. Now I dug it out and began to learn Morse Code.

The telegraph set consisted of a key and a sounder, mounted on a board and connected to a battery. When the key was depressed, the sounder's spring-loaded metal bar was magnetically drawn down, making a click. And when it was released a second click was heard, resulting in two clicks each time the key was activated. Of course, this was the very essence of Morse Code, which consisted of dots and dashes. A short interval between the two clicks represented a dot, and a longer interval a dash.

So far, so good. In Morse, the letter "A" consists of a dot and a dash. Simple. Now, put them together on the instrument and listen carefully for the sound of the dot and dash, out of the four clicks. Ha! Easier said than done! What's more, I knew that experienced telegraphers could trans-

mit forty or more words a minute.

As with any worthwhile endeavor, the operative words were practice, persistence, and more practice. Sending messages was tricky enough; receiving them was even harder. I was elated when I could listen to the sounders at the depot and pick out a letter, and eventually a word. After several months I could "read" most of what was being sent along the line. I was ready to apply for a job as a telegraph operator.

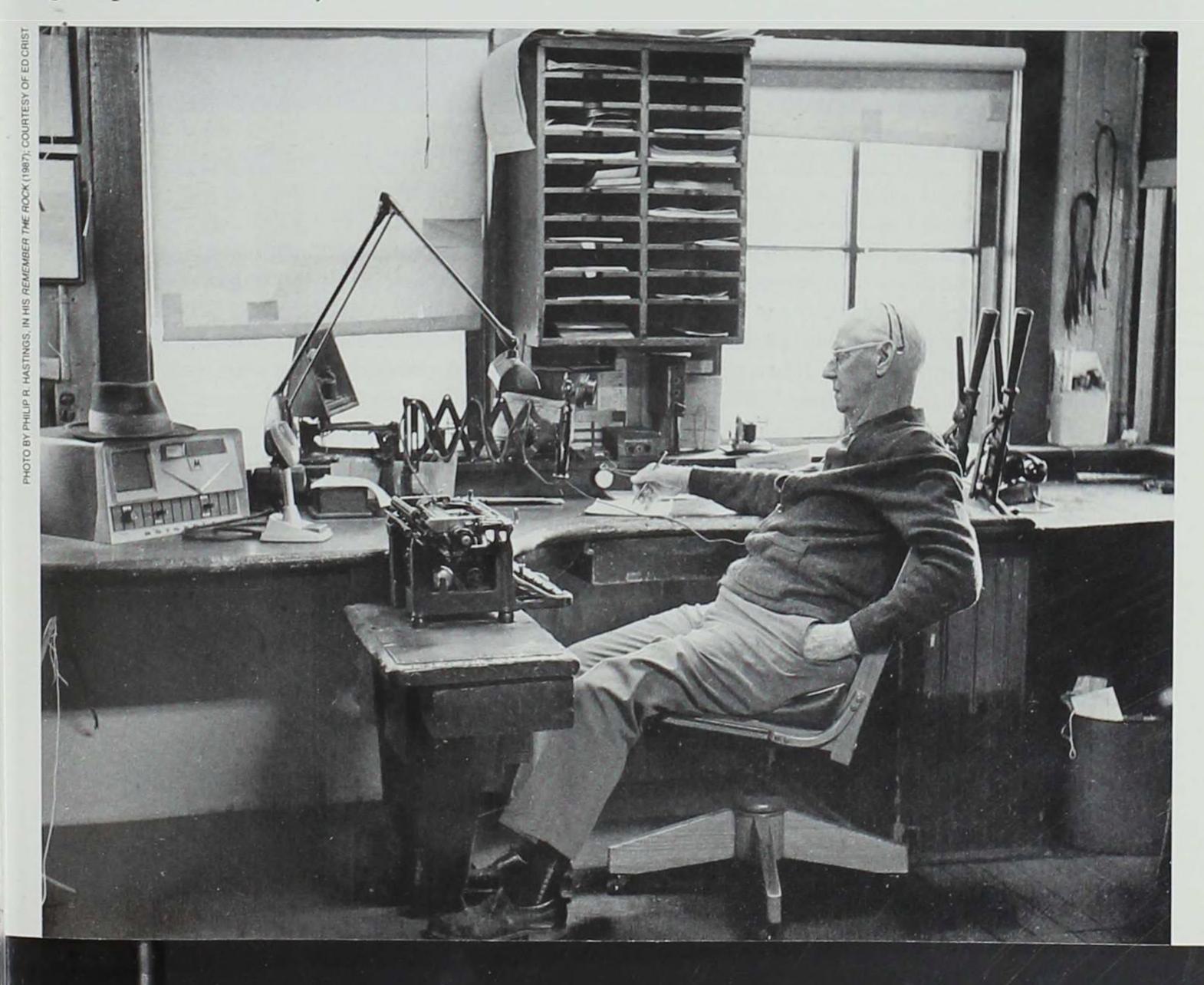
The Milwaukee Railroad wasn't hiring operators at that time, but the local Rock Island agent, Hank Thoelke, said they needed operators, so I made an appointment with Assistant Superintendent F. L. Campion at Estherville. Campion handed me a sheet of paper, pulled out a practice telegraph set from his back desk, and proceeded to slowly tap out a simple message. This I decoded with ease, and after passing a brief examination covering the railroad's operating rules, I was hired. The following week I nervously reported to the small north-

western Iowa station in Montgomery to relieve the agent for his vacation.

There were two telegraph wires in the Montgomery station, one for the train dispatcher and the other for railroad messages and Western Union telegrams (Western Union usually leased lines from the railroads). Each wire operated a relay, which picked up electrical impulses and transmitted them to the batteryrun sounder, which then resonated the sound so the telegrapher could distinguish the clicks. To my dismay, the Montgomery agent had not found it necessary to maintain the battery to operate the sounders. Relays, by themselves, were not designed for use in copying code, although by listening carefully an experienced telegrapher could "read" the transmission without the sounder.

I knew I wasn't an experienced telegrapher, and that I needed all the help I could get. After my initial panic had subsided, my first order of

Small-town depots of the early 1940s differed little from this 1966 view of the Rock Island depot in Marengo, with agent-operator Earl C. Berry.





Sign for east- and west-bound trains flanks window and Marengo agent-operator Earl C. Berry.

business was to find copper, blue vitriol crystals, and a "crow's foot" (a three-pronged piece of zinc), and to assemble all of these in a glass jar filled with water. Fortunately I found all of these items in a cabinet under the bay-window telegraph table; railroads routinely furnished battery supplies to depot agents. The zinc and copper would serve as positive and negative terminals, and the blue vitriol (copper sulfate) in the water would allow a transfer of ions.

Before my battery had built up a charge, however, the morning passenger train arrived and departed, leaving in its wake a broken rail directly in front of the depot. So, instead of simply having to telegraph the actual arrival and departure times to the division dispatcher in Cedar Rapids, I also had to alert him to the broken rail and the possibility of an accident, and to "discuss" over the telegraph what to do.

Without the battery-run sounder, I could barely hear the dispatcher's responses and instructions. Eventually, with an ear nestled up to the wire, I managed to convey and receive all the information needed, but it was a stressful way to start a job.

Needless to say, I was mighty happy later in the day when my battery had built up a charge and the sounders burst into life. I had survived my first day as a telegrapher. I was elated that my name and starting date (March 10, 1942) would now be added to the telegrapher's roster, and I would begin to build up seniority, which was crucial in the world of railroad employment.

To an operator, the telegraph was good company because the sound of the instrument was audible throughout the office. I could perform my normal office duties yet almost subcon-

sciously be kept informed of the progress of approaching trains (as reports were made to the dispatcher in division headquarters) as well as catch other items of interest from stations

along the line.

I made many friends among fellow telegraphers, most of whom I never actually met face to face. I could generally tell who was "talking" on the wire, because each person had his or her own "swing," or manner of sending. There were always slight variations in letter spacing and speed. Some telegraphers still "sent with their fists," using the regulation telegraph key furnished by the railroad and mounted to the desk. Others used a "bug," a semi-automatic speed key sold by the Vibroplex Company. Mounted on a sturdy metal base, the bug was a spring-loaded, upright arm with an electrical contact point on each side, actuated by the operator pushing an insulated paddle to the right with the thumb to produce a series of dots (the number determined by the operator's release of the paddle). Pressure from the indexfinger side produced dashes. A telegrapher with a bug could work a lot faster and therefore move more business through the depot. A bug was also a lot easier on the wrist; using a standard key could result in an awfully tired wrist for those who worked in the busier stations.

Iowa's larger stations certainly had enough business to occupy one or more telegraphers, especially during the war when railroad usage grew. The telegraph was used largely to convey orders from the dispatcher to trains throughout the division, to ensure their safe and efficient operation. But it was also used for many other purposes, such as agents ordering freight cars for their local shippers, and for freight and passenger rate requests from the railroad's traffic department. During World War II the telegraph was often used to obtain seat reservations, such as for a woman wanting to travel to the coast to visit a son, husband, or sweetheart before he was sent overseas. And, of course, Western Union telegrams were used to convey news of family crises. Most people were still reluctant to use telephones for long-distance phone calls and sent telegrams instead. In small stations, a telegrapher who received such a message might phone the family or hire someone to deliver the message, or sometimes even

leave the station briefly during quiet times to make the delivery. I remember well the anxiety and apprehension written on someone's face when I delivered a Western Union telegram.

I never became the boomer telegrapher of my earlier aspirations, but I did manage to travel a fair bit. Because the Cedar Rapids Division of the Rock Island included trackage of the former Burlington, Cedar Rapids and Northern Railway, our territory extended north from Burlington to Minneapolis, and northwest from Vinton to Sioux Falls and Watertown, South Dakota. This meant that as an operator on the "extra board," I worked in many different sta-

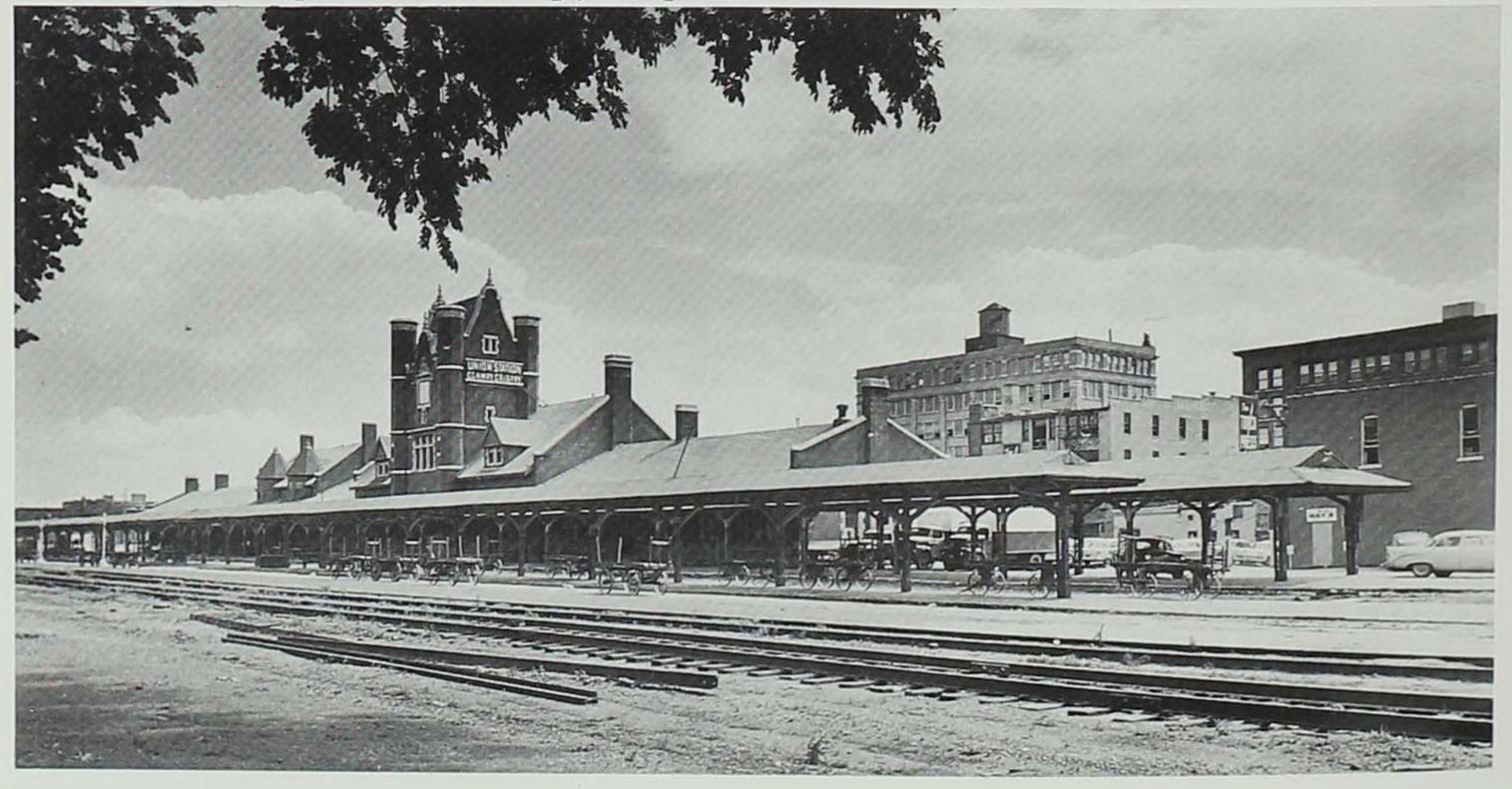
tions in a variety of jobs.

I traveled by train from one job to another, often filling in during an operator's two-week vacation. Few of the small towns had hotels or cafes, so the local agent usually arranged with some local family to "board" me. The room in a widow's home in Brandt, South Dakota, was typical of several where I stayed. My cold upstairs bedroom had a large white pitcher and bowl on a commode for washing and shaving. The woman didn't serve meals, but another home near the depot had a restaurant booth in a corner of the living room. On my first visit there, I cautiously entered and was cheerfully waved toward the booth. "We're having roast beef," the man said. "What'll you have?" Now, presumably they would have prepared a hamburger or a cheese sandwich just because I requested it, but I didn't ask. Somehow I got the impression that what they were having would be the best bet, so I had the roast beef, and for all future meals I went along with the house special.

I soon learned that the "romance" of travel was balanced by the "amenities" of various accommodations. In Manly, Iowa, I received the landlady's wrath when I accidentally used up all her hot wash water for a bath for myself. In West Liberty I stayed in a typical two-story wood-frame hotel near the depot, where the fire escape was nothing more than a coil of rope tied to the radiator near my bedroom window. My room at Goldfield was directly above a local tavern; on some nights the jukebox was turned up high to match the exuberance of the singing, foot-stomping patrons well into the early morning hours. At Conesville, in south-



Union Station in Cedar Rapids. Serving both Rock Island and North Western passenger trains during World War II, the depot in these postwar views is empty and quiet.



eastern Iowa, I had a nice room with a very pleasant family. But I never fully developed an appreciation for a frequent delicacy, turtle stew.

I remember well the agent at the Conesville depot. He sent code in an erratic manner; other operators said he had "telegrapher's paralysis," meaning a nervous disorder, perhaps caused by the stress of the job. When I checked in to relieve him, he made two requests: First, I should always wear his ancient, black stationagent's cap whenever trains were expected. And, second, I should meet the evening train after supper, to prepare billings and see that daily shipments of cream in ten-gallon cans and any express shipments were properly loaded on the passenger train. I complied with the second request, but not the first. Except for him, agents no longer wore uniforms or the caps with personalized metal nameplates, which had once signified the local stature of a station agent.

For most of one winter I lived in the Cedar Rapids YMCA. My room was typically YMCA—very small and narrow, with an open closet and one window. The transom over the door provided badly needed cross-ventilation, but it also carried in any noise from the hallway. I worked from 2:45 A.M. until 10:45 A.M. or noon. Therefore I was still in bed during the noisy evening hours when other young people were apparently having a hilarious time in the hallway.

The job at Cedar Rapids was as telegrapher-ticket clerk for both the North Western and Rock Island railroads in the station located at Fourth Street and Fourth Avenue. I received quite a thrill one morning when R.L. Williams, the president of the North Western and a former telegrapher himself, called on the wire from Chicago, exchanged greetings, then asked me to telephone a personal message to his mother in a nearby town.

The Cedar Rapids station was a busy one, especially now that the United States had entered World War II and railroad usage had increased. I was the only person in the office during the early morning hours; the two ticket clerks and the agent didn't come on duty until 8:00 A.M. But well before that, by 5:50 A.M., the "City of Denver" Streamliner had arrived and departed. The Streamliner was a popular train

because it connected with points in the East and Southeast, and because shoppers and business people could arrive in Chicago by 9:15, spend the day there, and return home yet that night. I was usually very busy at the ticket window or on the telephone the hour before train time. Understandably, people often became quite short-tempered if I was unable to serve them promptly.

One such morning is still etched in my mind. The "City of Denver" was running about thirty-five minutes late, and an irate woman came to the ticket window. "Why don't you answer your phone?" she demanded. "Since I couldn't reach you, I had to rush down here, only to have to sit and wait for the train!"

"Lady," I replied with as much calm as I could muster, "at this very moment, while I'm talking to you, both of my city telephone lines are ringing, and that clicking of the telegraph instrument is the train dispatcher calling me on the wire." Of course, this explanation didn't really satisfy her, but for station employees it was a typical morning during the early months of the war.

Many of the trains on the high-speed main line running from Minneapolis to Kansas City and Dallas were for the military. We called them "Mains," and they certainly were given the main line all to themselves! I remember all too well standing within inches of these and other mile-a-minute passenger and freight trains to hold up "hoops" from which the crew would grab train orders. First, I would hold up the engineer's hoop; he would grab the bundle of paper as he passed. Then quickly—before the middle of the train passed—I'd drop the first hoop and pick up the second one for the conductor. After he grabbed it and before the last car passed, I would switch to the rear flagman's hoop. Of course, for freight trains only two hoops were required, one for the engineer and one for the conductor in the caboose.

My job in Albert Lea, Minnesota, was to operate a centralized traffic-control board, which controlled the trains of three different railroads on a single-track main line coursing with war-time traffic. Operating it was much like playing with model trains, except that this was real life. Outlined on the board in front of me was a large map of the main line between

27



Centralized traffic-control (CTC) boards showed locations of trains and switches and helped coordinate traffic.

Albert Lea and Manly, along with passing tracks and other sidings. Small lights on the map indicated the location of all trains and the position of switches and signals that were controlled with small levers on the board. Long passing tracks and remote-controlled, power-operated switches allowed trains going both directions on a single-track main line to have four-fifths the efficiency of what double tracks could have carried.

The well-equipped relay office in Estherville, Iowa, was equally busy during these years. There I felt immersed in telegraphy. By now I had more experience as a telegrapher, and had the satisfaction of "working the wire" with some of the nation's most proficient railroad and Western Union relay operators, male and female. In this relay office, several sets of automatic repeaters picked up weak signals from

long-distance wires and retransmitted them to other wires in a strengthened condition. Each repeater circuit consisted of four instruments that were as loud as telegraph sounders. When all circuits came alive, a great crescendo of sound filled the room.

Lake Park, another northern Iowa station, had such a high volume of business that a station helper was on the payroll. His name was Kenny Rowe, a recent high school graduate. He was a likable young man and a good worker. Seeing that he was eager to learn to telegraph, I sent practice code to him after work and at other odd moments during the day. But during my second week at Lake Park, Kenny took a day off and went to Des Moines for an enlistment physical.

Within two years, I, too, had enlisted and graduated from the Naval Radio Training

School at Northwestern University. In January 1945, I reported to Terminal Island, San Pedro, California, for assignment aboard the attack transport USS *Elkhart* (APA-80). While meeting other members of the ship's company, I noticed a radioman 2/C who looked strangely familiar. Sure enough, it was Kenny! He had just recently returned from several amphibious landings in the South Pacific and was being reassigned to the *Elkhart*. As I reported to the ship's radio shack, I realized the tables had turned: Kenny would be my shift supervisor.

After the war, I attended college and eventually became the General Mechanical Engineer for Union Pacific, with several engineers on my staff. By the time I retired in 1982, I had witnessed many changes in railroading since my youth. Yet I still remember from the 1920s and 1930s the pot-bellied coal stove in the middle

Below: Holding up successive hoops with train orders for the engineer, conductor, and flagman tested a station agent's speed, dexterity, and nerve when trains (unlike this one) barreled by at top speed. of depot waiting rooms. On the wall would hang a Chicle machine that dispensed gum and chocolates for pennies. And every morning at exactly eleven o'clock, telegraphers and station agents across the Midwest would adjust their clocks and pocket watches to the correct railroad time, which was transmitted over telegraph lines.

It has been said that at one time a person could stand anywhere in Iowa and not be more than ten miles from railroad tracks, giving Iowa the distinction of having had one of the most dense rail networks of any state. Much of that vast network has been abandoned. Gone with it are the agent-telegraphers, as well as most small-town depots that were once vital centers of community life and technological wonder when the great locomotives roared in and the telegraph keys clicked steadily. After almost a century and a half of active service, all telegraph lines in the United States are now silent. Yet sometimes in quiet reverie I can still hear the beautiful, crisp staccato sounds of perfect Morse drifting across the years.



Smith Wildman Brookhart The Man Who "Taught the Army How to Shoot" The Soldier held his balligned the sights and squeez

by George William McDaniel

HE SOLDIER held his breath, aligned the sights, and squeezed the trigger—then eyed the result on the distant target. Had he followed all the steps correctly, he wondered. He could check easily enough, by glancing at the small card pinned to his sleeve. This "Ten Commandments of the Firing Point" checklist had been created by Smith Wildman Brookhart, an

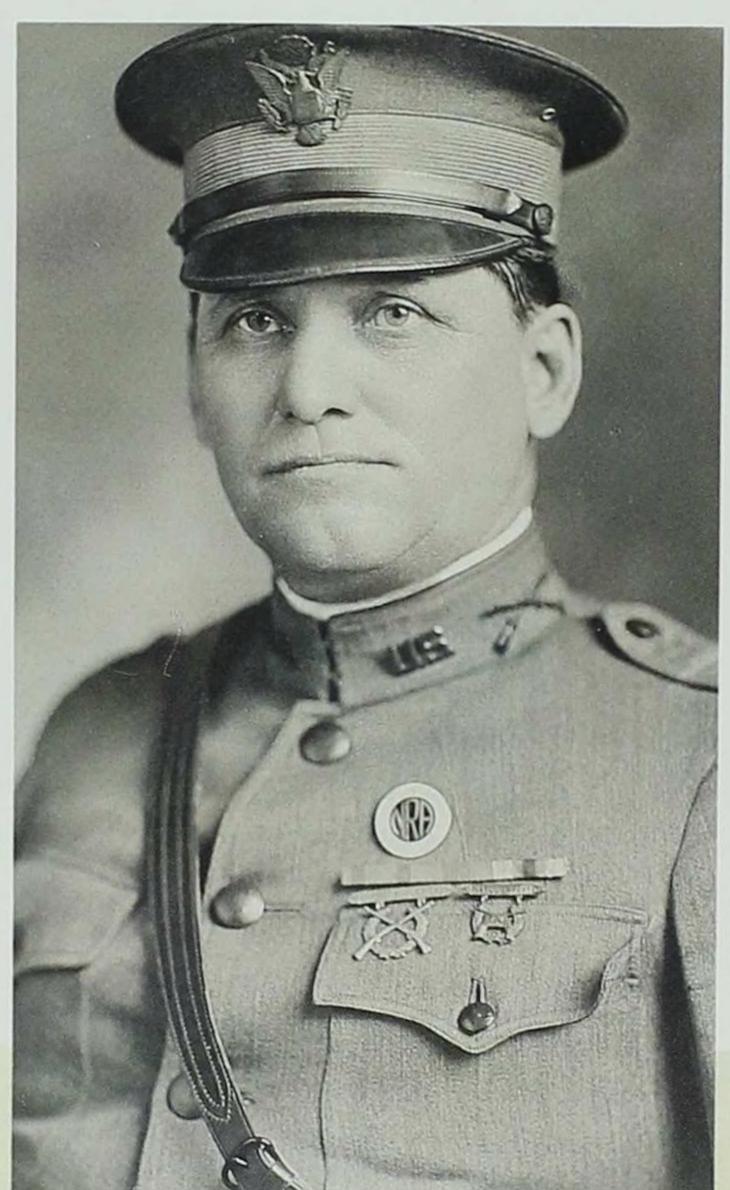
Upper right: Smith Wildman Brookhart. Below: second edition of Brookhart's pocket-sized rifle-training manual, used by the army during World War I. Camp Perry, Ohio, site of national shooting matches and training schools. Row of targets is just visible on the horizon, where the camp bordered Lake Erie. RIFLE TRAINING FOR WAR Lt. Col. S. W. BROOKHART Infantry, U. S. A. Published by the NATIONAL RIFLE ASSOCIATION OF AMERICA NATIONAL BOARD FOR THE PROMOTION OF RIFLE PRACTICE SECOND EDITION Revised and Enlarged WASHINGTON GOVERNMENT PRINTING OFFICE

Iowan who by World War I had achieved national stature for marksmanship training.

Brookhart was not the first, but was among the most skilled, to teach Americans how to shoot a rifle with bull's-eye accuracy. He became one of the most vocal and persistent champions of training programs, pushing for them first on the local level in Washington County, then on the state level in Des Moines, and finally on the national level.

Smith Wildman Brookhart was born in Missouri and grew up in Iowa. In the late 1880s he taught school and read law. Following admission to the bar in 1892, he moved to Washington, Iowa, to begin practice. Within a year he had been elected county attorney and had begun a life-long career in politics, which would eventually result in several years as a U.S. senator.

Even before his entrance into politics, however, he had enlisted in the Iowa National Guard, a volunteer organization comprising local companies. Brookhart joined Company D, the guard unit based in his hometown of Washington, Iowa. He entered as a private and



ALL THREE PHOTOS, SHSI



Smith Wildman B The Man Who "Taught the Army How to Shoot" rookhart SOLDIER held

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Perry, Ohio, site of national shooting matches and training schools. Row of targets is just visible on the horizon, where the camp bordered Lake Erie. Upper right: Smith Wildman Brookhart. Below: sec-ond edition of Brookhart's pocket-sized rifle-training manual , used by the army during World War

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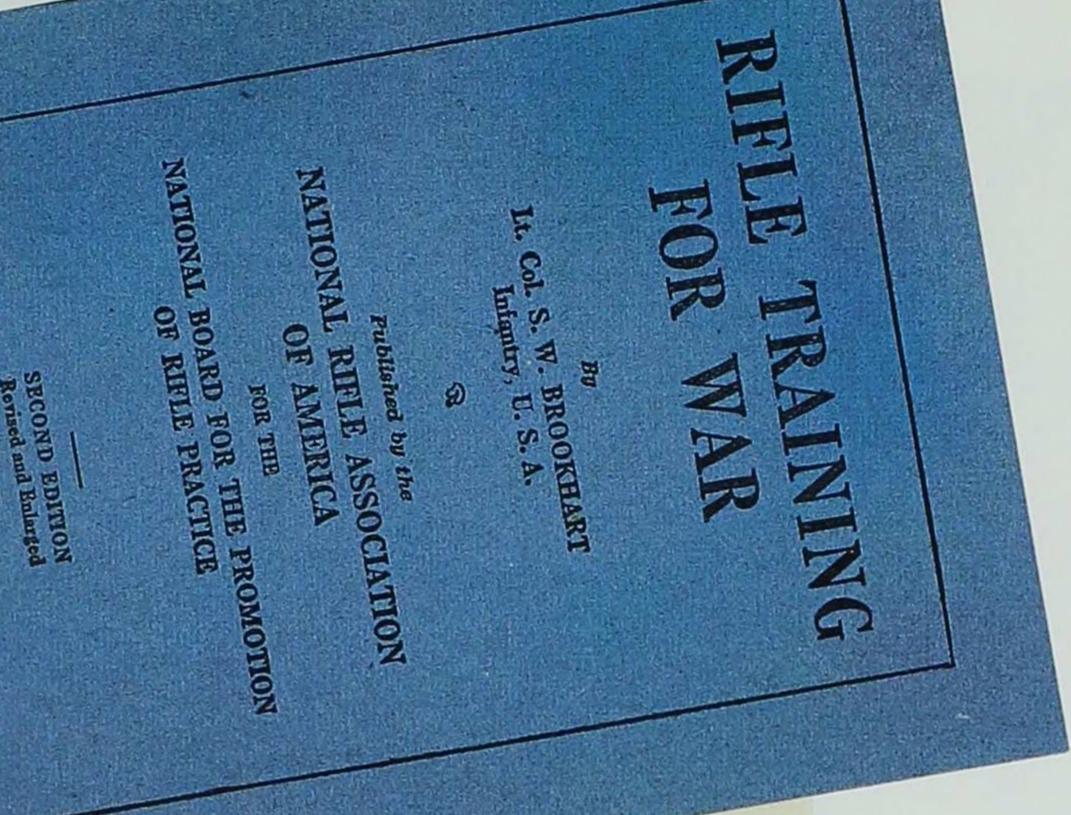
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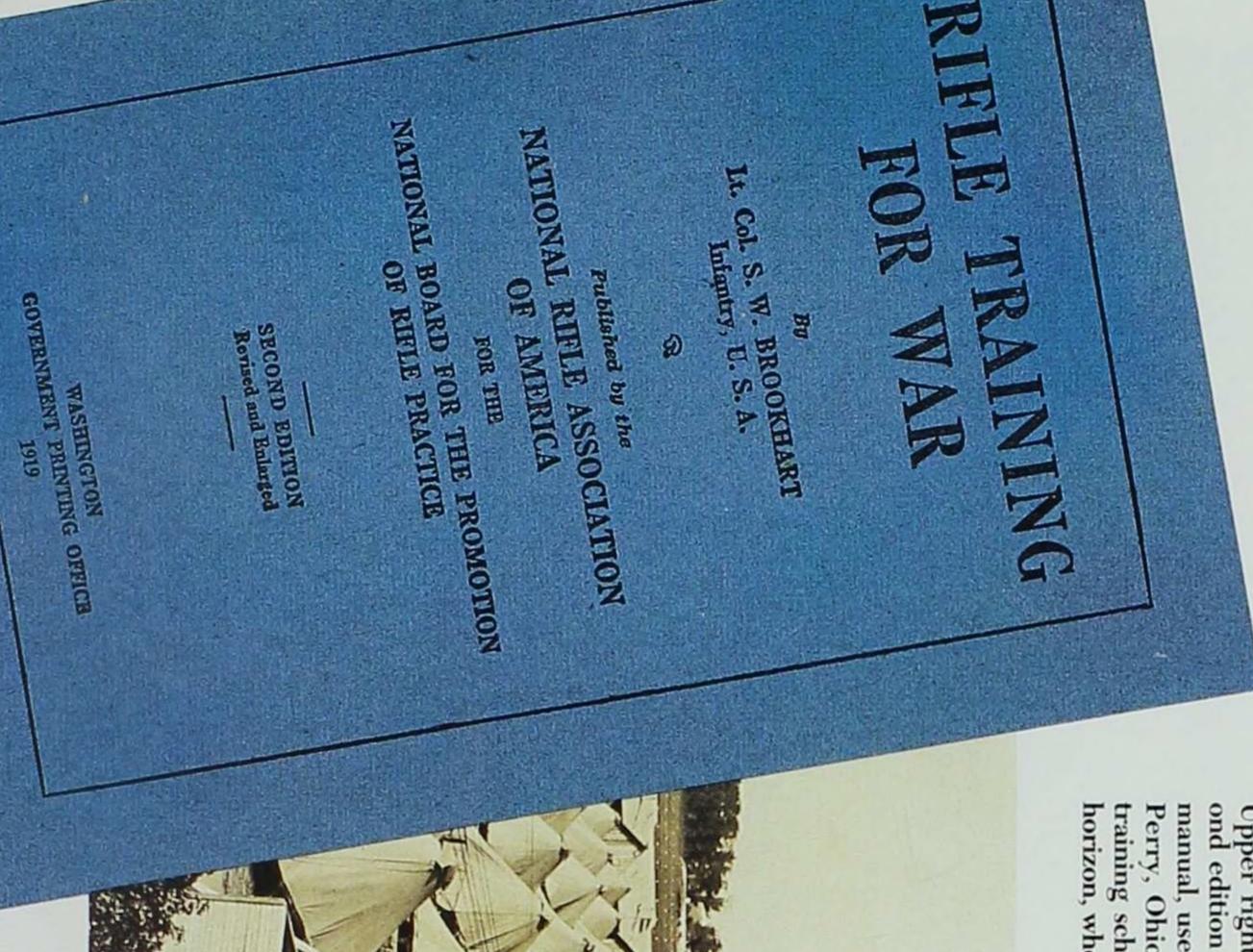
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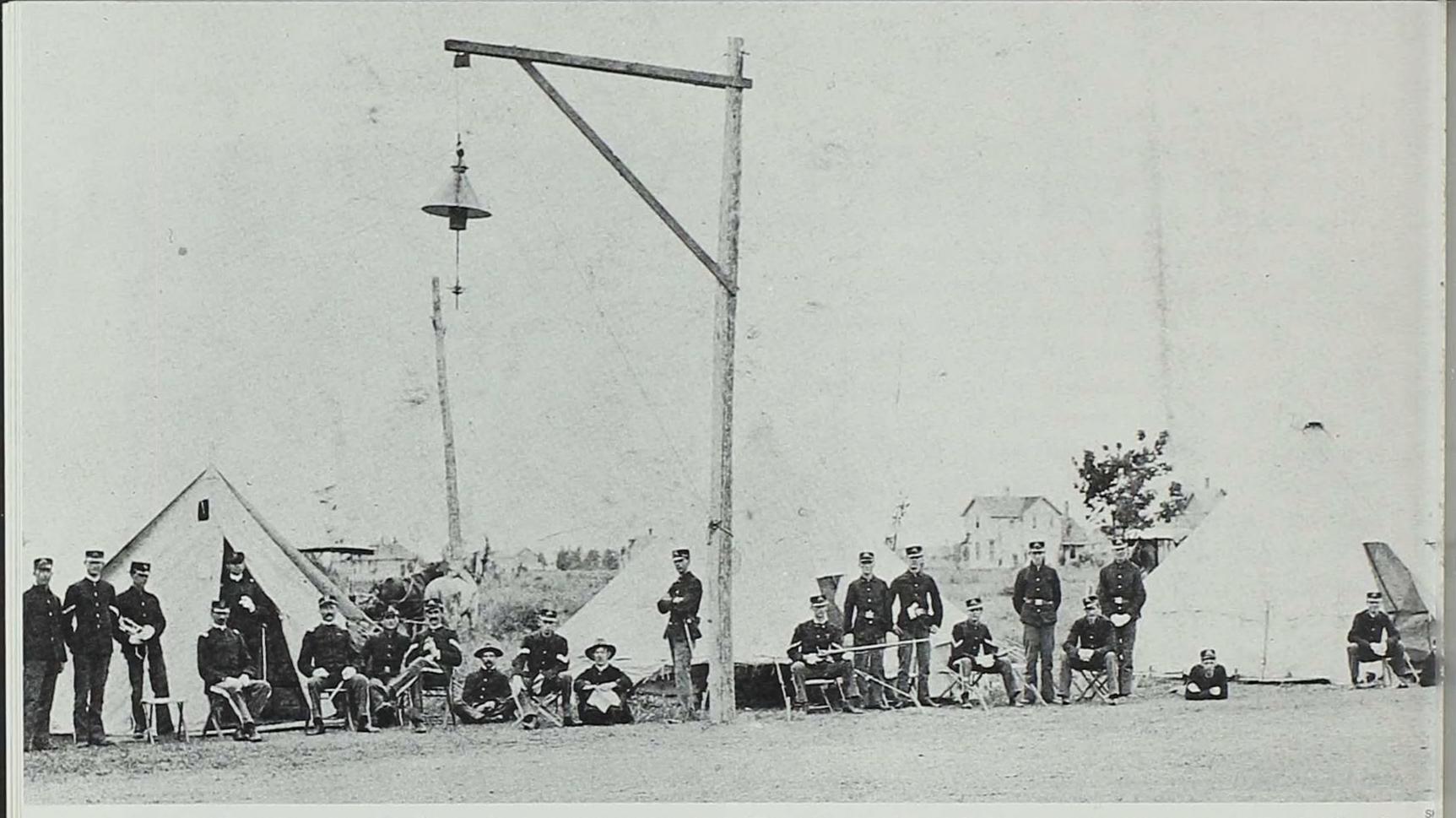


ALL THREE PHOTOS, SHSI









Camp Glasgow in Washington, Iowa, 1897. Here Brookhart began his military career in Company D, the local National Guard unit.

within a year was promoted to corporal. National Guardsmen elected their officers, and in 1897 he defeated two other candidates to become a second lieutenant. His election by the men confirmed the opinion of the local Washington Evening Journal that Brookhart was "one of the best posted men in military tactics in the business." The military tactic that most interested him was rifle marksmanship, which many considered vital to modern warfare.

Marksmanship had not been particularly important in the Civil War, given the weaponry and the battle tactics. Although the standard muzzleloaders lacked precision, the rows of soldiers advancing side-by-side did not. If the musket ball missed one soldier, it would probably hit someone else down the row. But after the Civil War, new breech-loading guns could be much more accurate in the hands of a trained shooter. This launched a movement for riflery training, headed by militant journalist William Conant Church, founder of the National Rifle Association (NRA) in 1871.

Although several former Union officers helped found the NRA, the U.S. Army ignored their call for rifle training; sharpshooting would

encourage individualism, an undesirable trait in enlisted men. Instead, the NRA focused on training interested citizens and National Guardsmen. With the help of the New York legislature, the NRA built a hundred-acre rifle range called Creedmoor in Long Island and began to sponsor competitions. By 1874, in its first international match, the American team hit the bull's-eyes a half-mile away with amazing accuracy, and beat the reigning champion from Ireland.

Building on this success, the NRA sponsored numerous competitions and trained guard units. "Rifle clubs and ranges popped up at an astonishing rate across the country," according to Osha Gray Davidson's history of the NRA. But the popularity of rifle competitions began to fade, and the NRA lost state funding of Creedmoor matches.

OMPANY D, the National Guard unit in Washington, Iowa, was first organized in the 1870s and over the years had built a tradition of prize-winning rifle marksmanship teams. In the 1890s, when Smith Brookhart enlisted, the company and

former members often competed against each other. These were neither formal nor regular competitions, but rather occasions for bonhomie and good-natured wagers. One time, for example, a challenge in the local Washington Evening Journal read: "From Co. D, to the fossilized shooters of the city." The next day the "fossilized shooters" chided the young team for "trying to get out of [its] class" by challenging them. On another occasion an oyster supper was the prize; the younger team lost and had to treat the winners. "Some of the boys," the paper commented, "when the feast was ended, looked like the Irishman's stone wall—he built it four feet high and six feet wide, so if it tumbled over it would be higher than it was in the first place." Good-natured banter was typical for the Washington sharpshooters.

Brookhart participated in local competitions, but with no distinction. In a shoot in Muscatine, for example, he scored 124 out of a possible 225. Another time he hit a telegraph pole and a nearby window, but rarely the target. Eventually his scores improved; in 1897 he qualified for the sharpshooter's medal. But he would never become a great shooter. His real skill was in pressuring for training programs and in articulating a philosophy and methodol-

ogy.

Brookhart believed that diligent practice was essential, of course, and that the shooter must take into account factors such as wind, temperature, humidity, distance, and body position. Brookhart knew, however, that shooting was much more than a mechanical process. The shooter had to believe in himself and to believe that he could hit the target. For Brookhart, the necessary mental attitude was: "A belief in straight shooting. An enthusiasm for straight shooting. A pride in straight shooting."

Equally important was one's physical condition, what Brookhart termed the "normal condition." In fact, he would admit, "I am a crank for the normal condition." Brookhart's "normal condition" was based on, first, a proper diet of water, milk, and plain foods in moderate quantities and without strong seasoning. Tobacco and other stimulants should be avoided. "The proper attitude of mind will give every man more pleasure in conquering a habit than in submitting to it. To win over the smoking habit

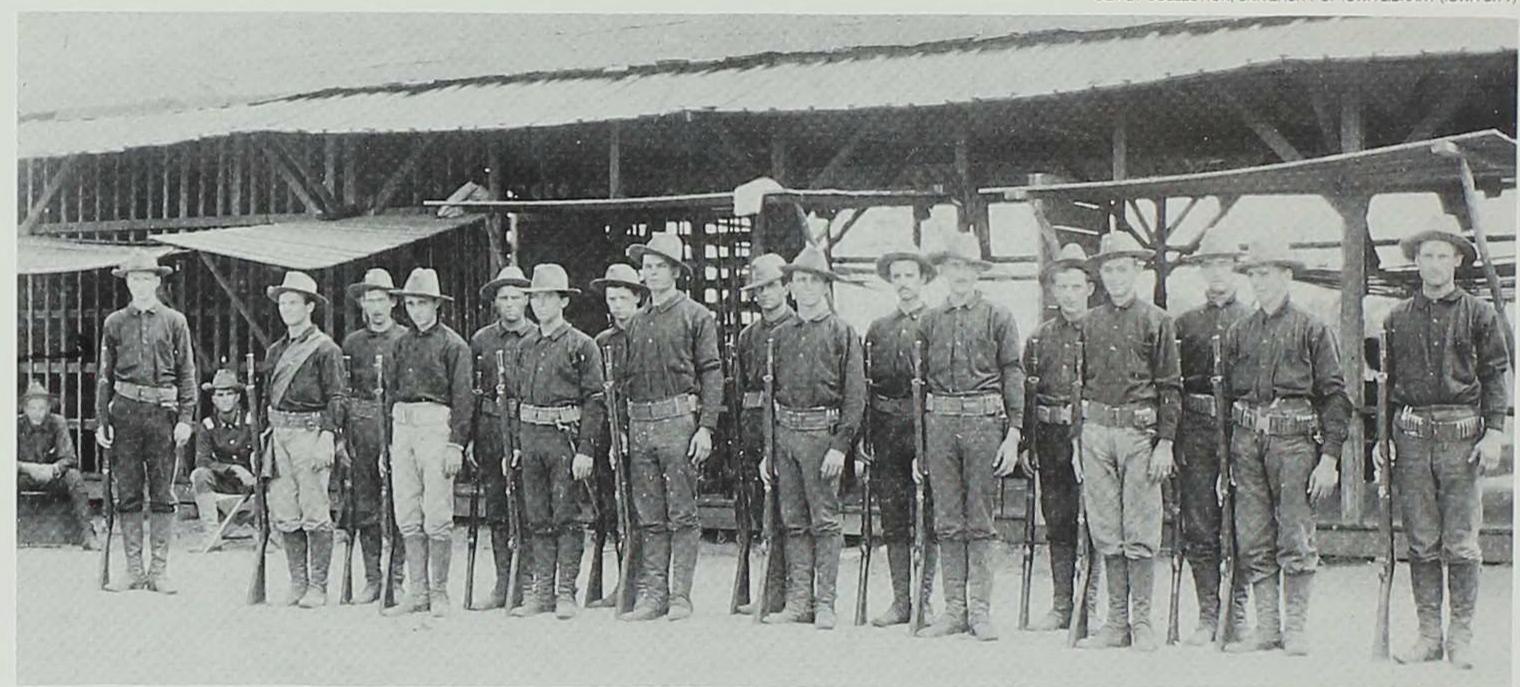
is an achievement of which to be proud," Brookhart would write, "and it improves the scores."

Finally, Brookhart, a life-long prohibitionist, expected Company D to avoid alcohol. He refused to overlook the occasional use of alcohol in camp and considered it a "capital offense." Usually, however, he fought a losing battle; more men went to town for liquor than stayed in camp to drink the lemonade he provided. As a shooting instructor, he used his clout to occasionally drop a shooter from the team for drinking. He even forbade temperate use of alcohol; any man who needed a drink to steady his nerves was unfit to be on a rifle-shooting team. "Total abstinence, bone dry," he preached, "is the only safe rule."

In rifle shooting Brookhart found an activity that was a perfect complement to his own personality and predilections. The elements were uncomplicated (aim, pull the trigger, hit the target), and study and discipline would pay off in success. He neither smoked nor drank and his habits were simple. In other words, he was what he advocated—a man in "the normal condition." He believed that the normal condition made for "efficiency" in shooting, in the military, "or in any other line of human service."

War broke out in 1898, Company D and the rest of the Fiftieth Regiment, Iowa Volunteer Infantry, was stationed at Camp Cuba Libre near Jacksonville, Florida. The Fiftieth neither saw battle nor even left Florida, and in the abundant free time Brookhart took his men to the nearby rifle range for practice. But he had been issued only thirty rounds of ammunition per man for practice. What could a guardsman learn with thirty bullets, he wondered. Frustrated, he knew he "couldn't train anybody to be expert at anything doing it 30 times."

Once the Spanish-American War had ended, Company D was mustered out of service, and the company was dissolved. After an anticlimactic six months battling first boredom, then incessant rain, and finally typhoid and malaria, the men eagerly resumed their civilian lives in Washington, Iowa. But not Brookhart. Within



Spanish-American War troops in Jacksonville, Florida, 1898. Brookhart is seated, second from left. To fill time, Brookhart took his men to the rifle range, but practice ammunition was limited to thirty bullets per man.

days he had inquired about organizing a new company, and within two months had supplied Iowa's brigadier general with names of Washington men, both veterans and new recruits. By late January local interest was revived and forty-four men had enlisted.

Unanimously elected as captain, Brookhart set about equipping and training the new company. By May new Springfield rifles had arrived from the Rock Island Arsenal, and Brookhart immediately ordered extra drills with the new weapons to prepare for the local Decoration

Day parade.

Brookhart discovered 18,000 rounds of ammunition requisitioned by a previous captain but never expended. Here was something to work with! He set up a rifle range on land two miles west of town. A thirty-foot bluff bordering the site would absorb stray bullets. On June 7 he wrote Iowa's Brigadier General Melvin H. Byers, reporting that the range was finished, and that he needed fifteen dollars reimbursement and targets so the men could begin rifle practice. The range served the company for two years; then Brookhart built a longer range so the men could use larger weapons and practice charging.

The order and discipline of the military appealed to Brookhart's own sense of discipline. Military rules and protocol became new

subject matter for him to study and master. He worked hard to improve Company D and to acquire the best equipment available. At one point he used his own money to purchase a building in the hopes of remodeling it into an armory. When that did not come about he sought state appropriations for a local armory.

Moreover, Brookhart knew the political "currency" of the National Guard. He had grown up in an era when Civil War veterans had kept their titles and used them as a means of entry into politics or the community power structure. Ambitious for other political office once his term as county attorney ended, Brookhart knew his position in the National Guard would

keep him in the public eye.

Yet most of Company D lacked military or political aspirations and did not share their captain's enthusiasm for drill and discipline. Although some were Spanish-American War veterans, most were new recruits. For many of them the guard's obligatory two-hour drill each week was really "a night out with the boys," and the August encampment was a chance for adventure. Although they welcomed their pay of ten cents an hour, they resented Brookhart's strict leadership "by the book," and in time his natural zeal for discipline and order caused dissension. At the same time Brookhart's other interests demanded more of his time. His law

practice was developing, he was a candidate for district judge, and he and his wife, Jennie, had begun a family. In May 1902 he resigned from the company.

OR THE NEXT five years Brookhart concentrated on politics, his law practice, and other business interests, but he also maintained his interest in rifle shooting. In January 1907, Governor Albert B. Cummins, as commander of Iowa's National Guard, appointed him Inspector of Small Arms Practice, with the rank of colonel. Brookhart was in charge of rifle marksmanship for all National Guard units in Iowa and of preparation of an Iowa team for national competition. The appointment recognized Brookhart's work and expertise in rifle shooting. The Washington Evening Journal noted that he "is a man who goes into his work thoroughly and conscientiously always, and friends and political antagonists alike will be pleased to hear of the honor that has so worthily come to him." In Des Moines, Brookhart set out at once to create a

state rifle range on land the state had recently acquired north of Des Moines. He began to select an Iowa team for the national matches at Camp Perry, Ohio.

National competitions had started up again soon after the turn of the century, and the NRA was again flourishing. Marksmanship owed its new popularity to the guerrilla Afrikaners in the Boer War: They had not defeated the British, but their sharpshooting had impressed them enough that the British military began to emphasize target shooting. Canada, and then the United States, picked up on the trend, and the NRA pressed again for training programs and governmental support. In 1903 the U.S. War Department founded the National Board for the Promotion of Rifle Practice to encourage rifle practice and to produce qualified marksmen in the event of war. Quasi-governmental, the National Board was instructed to stage shooting competitions, build and maintain rifle ranges, and "create a public sentiment in respect to the necessity of rifle practice as a means of national defense."

The national matches at Camp Perry were



Iowa team at Camp Perry matches. Brookhart is in the middle of the second row.

cosponsored by the National Board, the War Department, and the NRA. First held in 1903, the matches brought together state National Guard teams, military teams, and private shooting clubs for competition and instruction. Iowa had participated since 1904, when it placed 15th out of 19. More teams entered, and Iowa improved, staying consistently in the top half. By 1907, Brookhart's first year, Iowa placed 21st out of 48. By 1910 his team finished 4th, bringing home a congressional medal and prize money.

Brookhart's emphasis on practice meant that he saw any shooting competition as an opportunity for instruction. Here he could instill his ideas in the officers who attended, who would then take them home to their men. In these "schools of instruction," the step-by-step basics of rifle shooting were taught by Morton C. Mumma, who would head the military program at the State University of Iowa in Iowa City from 1909 to 1912, and again later in the decade. He and Brookhart soon became close friends. "These schools were not only pleasant and enjoyable," Brookhart recalled later, "but they also brought out the most practicable and scientific instructions the Iowa National Guard has ever received."

ROOKHART'S greatest honor as a coach was his selection by the NRA and the National Board to lead the American team at the Palma Trophy competition. The Palma had once been a truly international competition, dating back to 1876, when the United States won against teams from Ireland, Scotland, Australia, and Canada. Participation had dropped off throughout that decade, and the contest was not revived until 1901 and then only sporadically.

Now, in 1912, the United States would take on the Canadian team in Ottawa. Brookhart chose Mumma as his adjutant, and together they arranged try-outs for the twelve-member team. Excited to be the captain, Brookhart was nevertheless disappointed when a Company D shooter, John Jackson, withdrew because of illness in the family.

On September 10, the omens in Ottawa were not good. The team arrived but not their lug-



Morton Mumma (left) and Brookhart, at the 1912 Palma Competition in Ottawa. Brookhart's team beat the Canadians.

gage. A chill wind blew, sure to affect shooting accuracy. The next day lightning struck one of the trolley cars carrying the U.S. team back from practice. Saturday, the day of the competition, was warm but cloudy. In the first half, the Canadians led by five points. Mumma watched, chewing up "a perfectly good two-bit perfecto." Brookhart, according to the same observer, "just wore that same old satisfied grin of his and made figures on a pad. His self-control was something to wonder at."

In the second half, the Americans pulled ahead and finally defeated the Canadian team by eight points. World records were broken that year by both teams, and Brookhart telegraphed the victory news to President William Howard Taft, who sent back "hearty congratulations."

But perhaps the most touching tribute for

Brookhart was a local one a week later. Working in his Washington office late one night, Brookhart was surprised by the arrival of fifty men there to celebrate his triumph in Ottawa. Aware of Brookhart's pride in having strictly enforced local prohibition laws as county attorney, they joked with him that they were thirsty. He joked back that he couldn't comply "on account of certain arid conditions that have existed in this community," the newspaper related. The men offered their congratulations and the Washington band, apparently waiting in the wings, entered to play a few tunes. The last speaker was one of Brookhart's old political mentors, John Alex Young, who had always rejoiced in the accomplishments of a Washington boy and now wished Brookhart continued success.

ROOKHART'S SUCCESS would indeed continue. His reputation as a rifle expert now extended beyond Iowa. A life member of the National Rifle Association, in 1911 he had published the first of many articles in the NRA's national magazine, Arms and the Man. His annual trip to the Camp Perry matches brought him in contact with shooters from across the nation. And although the 1912 match had been canceled because of the Olympics and other international matches, a Company D shooter, John Jackson, was on the Olympic rifle team and won a bronze medal. And now Brookhart's American team had won the Palma. September 1912 brought yet another honor: he was elected to the NRA's board of directors. Over the next thirteen years he would serve on the executive committee and as second vice-president and finally, from 1921 to 1925, as president.

A year after his election to the NRA board, Brookhart joined the National Board for the Promotion of Rifle Practice. Now he was on the boards of the two groups most responsible for rifle-shooting competitions in the United States. No doubt Brookhart was pleased to see the participation of National Guard teams increase, and their records improve. He realized that the Camp Perry matches could effectively develop qualified shooters who could

become instructors in their own communities. To him, the annual match was "the greatest school of rifle practice in the world." The U.S. Army saw it differently.

Except for 1912, the Camp Perry matches had been annual events since 1903. At the January 1916 meeting, the National Board for the Promotion of Rifle Practice adopted Brookhart's enthusiastic motion that the match "be held this year and every year." But the War Department refused, citing the expense involved and time lost by regular army personnal in administration the matches.

nel in administering the matches.

Worried that this would "discourage rifle practice in the National Guard," Brookhart protested to Secretary of War Newton Baker and asked for a hearing. Baker explained that the army could not participate but that he had been "assured" that the matches could still be held without army participation. In the short term Brookhart's side prevailed, and the War Department hastily scheduled the matches for December 1916. But areas of disagreement between Brookhart and the army remained.

Funding for the matches was part of a longstanding tension between the regular army and the National Guard. According to the army, the state forces did not maintain proper standards of training or operation, and were of little use anyway. The army didn't believe that the matches were helping the guard improve their shooting and was reluctant to "waste" its money on the national matches when the army had

plenty of uses for the funds.

Brookhart interpreted the army's reluctance to fund the matches as part of what he saw as its larger goal-namely, to weaken, if not destroy the National Guard. As a populist, Brookhart strongly supported the idea of a citizens' army of volunteers, who devoted part of their life in service to the country. Militias had served the nation well since the American Revolution, Brookhart reasoned. Although he recognized the necessity for regular army officers at the highest level, he believed officers should come up through the ranks; in guard units, the men were equals who elected their officers in democratic fashion. The current army system, Brookhart alleged, had created an elite caste of career officers, trained by military academies to feel inherently superior to the

men they led. Such a system, Brookhart contended, "makes a snob and autocrat of every officer." He also disdained the practical training West Pointers received, claiming that they had "150 official hours of dancing and 30 hours on the rifle."

Brookhart also had a standing quarrel with the Ordnance Department about the necessity of rifle marksmanship. The "old school" of professional soldiers had long believed that marksmanship in the heat of battle was not possible. In their view, the soldier had only to scatter as many shots in the direction of the enemy as possible, on the assumption that some would find their target. It had worked in the Civil War. This view had been developed in Germany, adopted by West Point instructors, and disseminated through the ranks of professional soldiers. According to the army, therefore, rifle marksmanship—as advocated by Brookhart, the NRA, and the National Board was a waste of time and money.

Brookhart said flatly that the "German theory is all wrong," claiming that it used resources inefficiently and endangered soldiers' lives. It was not enough to simply fire at random and hope to hit something. Furthermore, rifle training and matches were not recreational, he maintained. They were integral to the training of soldiers and guardsmen alike. Soldiers were not being trained to win sharpshooter prizes but to protect their own lives, and they deserved the "best possible training in the use

of their weapons." He was also outspoken in criticizing the army in other matters. The army insisted on spotless weapons that would pass a white-glove inspection. Soldiers spent considerable time in cleaning their guns, sometimes using an abrasive that Brookhart believed damaged the weapon. "They would shine all right; they were beautiful inside," Brookhart said, but they would not shoot accurately. On another occasion he rejected some reconditioned rifles that the army had sent to the Iowa Guard. Brookhart said the guns were "worn out and worthless" and should never have been repaired in the first place. His men would "not be able to hit anything with them."

In the spring of 1916, the army made a critical move by changing the composition of the

National Board for the Promotion of Rifle Practice. Acting on a request by the General Staff and War College faculty, Secretary of War Baker expanded the board from nine to eleven members and filled the new positions with army representatives. Brookhart's term had expired at the end of 1915 and in the reorganization he was not reappointed.

VEN AFTER Congress declared war in April 1917, the United States was slow to enter the war in Europe. But as General John J. Pershing toured battle-fields and conferred with allied commanders, he became convinced that rifle marksmanship was necessary. In September, and again the next month, he cabled his superiors in Washington that "infantry soldiers should be excellent shots." Pershing recommended that instruction in small arms begin immediately.

The NRA greeted Pershing's message with relief. An editorial in Arms and the Man announced that the American commander intended to fight the war based on "American ideas" to "insure an American victory in an American way." When the War Department proposed bringing European instructors to train army riflemen, however, the NRA pointed out that the War Department had invested a great deal of money over the years in the national matches. These matches had produced more than enough expert American riflemen, like Brookhart, who were capable of training the soldiers. "The fact now stands out clear and plain that our men must be taught to shoot," the NRA agreed—but Americans should do the training.

Like thousands of other National Guardsmen, Brookhart had asked to be called into service. But as an outspoken critic of the army, he had been blacklisted (a story he would often tell years later), and only the collusion of two old friends had gotten him on active duty. An old ally, Colonel Ira L. Reeves, had become

Right: American troops march through London in June 1917. By September, American commander Pershing would cable Washington to launch small-arms training because "infantry soldiers should be excellent shots."



assistant chief of the Militia Bureau and found a list with Brookhart's name at the top. When his superior was out of the office, Reeves submitted a list of names, including Brookhart's, to the assistant chief of Ordnance. This man, also a friend of Brookhart's, waited until his chief was out of the office and then issued the orders to put Brookhart on active duty. Both officers neglected to inform the personnel section until Brookhart had reported for duty. Protests were made about the procedure, but ultimately the judge advocate general ruled in Brookhart's favor. At long last he was in the army. "After I was in," he would recount years later, "it was harder to put me out than it was to keep me from coming in."

In mid-November in Des Moines, Brookhart was mustered into service with the rank of major. Soon in Washington, D.C., he reported to the Chief of Ordnance, who assigned him to the Small Arms Division. Brookhart remained in Washington long enough to write a report, with his old friend Col. Morton Mumma, recommending that the army establish rifle-train-

ing camps.

Next he was sent to New Haven, Connecticut, for ten days. There he toured the Winchester rifle plant and worked on its assembly line to get a better sense of the rifle.

His stay in New Haven reveals much about his no-nonsense approach to life. First quar-



At Camp Dodge in Des Moines, Brookhart's training program in January 1918 was well received.

tered in the Taft Hotel, he switched to thriftier accommodations in a Yale dormitory available to the army. He purchased a meal ticket for the campus dining room, preferring its forty-fivecent meals over the dollar-and-a-half meal at the Taft. On Thanksgiving he strolled through the Yale University museum. Its famous collection of Greek vases he dismissed as the "oldest collection of kitchenware" he had ever seen. Two pianos reportedly played by Haydn and Beethoven did not impress him; when he plunked out "Yankee Doodle" on one, he found it so out of tune that it "sounded like a Russian constitutional convention." Brookhart was a utilitarian, with little sense of the aesthetic. Thus Greek vases were "kitchenware" and pianos were useful only if in tune, no matter who had played them or owned them. He wrote home that his solitary afternoon in the museum was spent "without interference, obstruction or enlightenment."

ROOKHART WAS SOON ordered to report to Camp Dodge in Des Moines to train rifle shooters in the 88th Division. He stopped in Washington, Iowa, on December twenty-first. Despite the approaching holidays he stayed only three days with his wife and six children. He reported for duty on the day before Christmas, only to find that most of the officers were away from camp for the holiday. Brookhart would have to wait until December 26 for his students.

Over the next three weeks he instructed over two thousand officers in rifle marksmanship. The original schedule had called for officers to attend only one hour a day at their own discretion. Most of the officers stationed at Camp Dodge were regular army, so Brookhart expected a cool reception. He was pleased and surprised when he was cordially received. Many officers went beyond their scheduled one hour and spent the entire day honing their rifle skills, only to return for further work at night. He concluded that perhaps opposition to marksmanship in the regular army had come from officers in the bureaucracy and not those

in the field. Brookhart considered this the busiest month of his life, but he regretted leaving because of the new friends he had made.

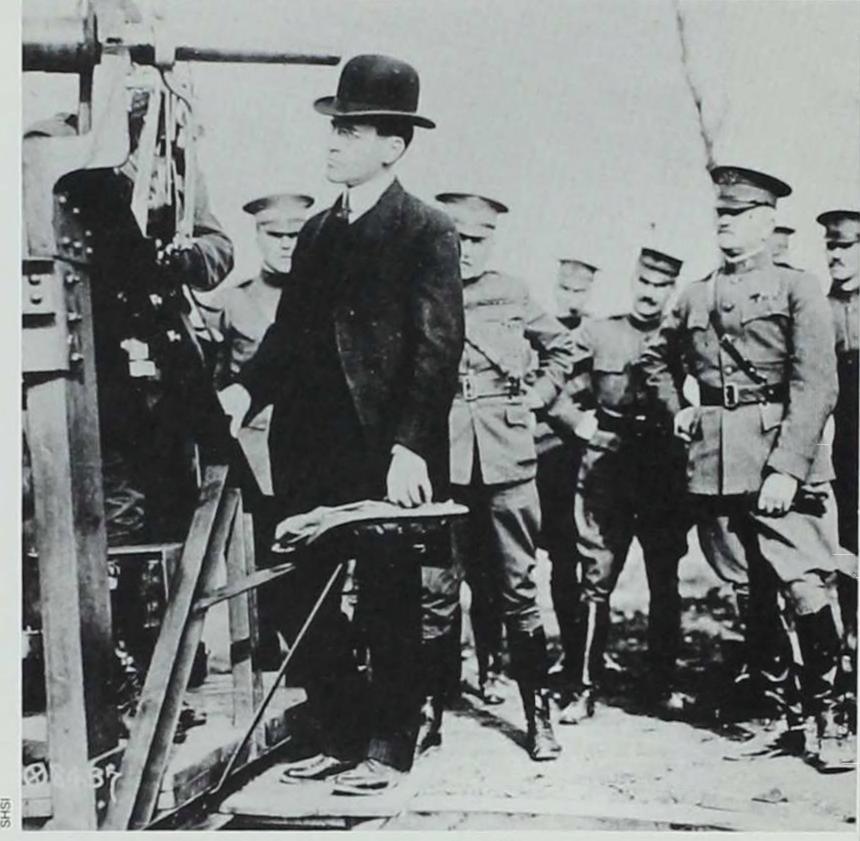
Back in Washington, Brookhart prepared a report of his activities at Camp Dodge. The report found its way to the desk of Secretary of War Baker, who ordered Brookhart to come see him. Since Baker's reorganization of the National Board, General Pershing had kept up the pressure for rifle instruction, and now Baker wanted Brookhart to explain his theories.

Brookhart repeated again why the German theory of marksmanship was wrong and why its supporters (the War College and Ordnance generals) were wrong. He explained why he was no longer on the National Board, and how the War College memorandum to Baker had precipitated the board reorganization and shift of power. Reportedly this angered Baker—who hadn't realized he had been a pawn-but Brookhart reassured Baker that recent appointments, which included Mumma, had helped restore balance. Finally, when Baker asked him about rifle training for the army, Brookhart outlined a plan for a rifle school that could serve the whole army and be taught by a ready-made corps of marksmen trained at the national matches.

Baker had heard enough. He ordered that planning begin. On April 15 orders were signed to establish a small-arms school at Camp Perry. Classes would begin in late May.

Mumma was put in charge of the project, assisted by other national match shooters and Brookhart. Meanwhile, Brookhart tested rifles at nearby Camp Meade and wrote a series of articles for the NRA's *Arms and the Man*. The six-part series, "Rifle Training in War," would appear in April and May of 1918.

HE ARTICLES gathered in one place the ideas Brookhart had used so successfully since the late 1890s. Here he articulated his emphasis on the shooter, not just on his weapon. He restated his ideas on alcohol and tobacco. He detailed the problems of flinching and being gun-shy (called "buck fever"). His constant theme was that the



Secretary of War Newton Baker (in black bowler) and General John Pershing (right foreground) inspect antiaircraft gun in France. Only limited supplies of antiaircraft and machine guns were used in World War I; Brookhart and others still pushed for rifle sharpshooting.

shooter must be in complete control of himself and his weapon.

There was nothing new in the articles; Brookhart had been teaching these same ideas for years. But now the timing was right; the war gave his ideas added weight. "We are now going out to shoot at targets that will shoot at us first if they can," he wrote. "The importance of fire discipline, fire direction, fire control and fire distribution, is brought home to us with a personal meaning." The NRA and the National Board reprinted the articles in a pocket-sized Rifle Training in War. This became the army's standard rifle manual during 1918.

As chief instructor at Camp Perry, Brookhart reminded his students that they were not training for rifle matches but for war, a "great test of liberty of the world." "Preliminary training, if done right, means finished training," he cautioned. "You make haste by starting slowly." The students settled quickly into a routine of daily instruction and practice on the ranges. To remind them of the fundamentals, Brookhart wrote up the "Ten Commandments of the Firing Point," a checklist about gripping the weapon, breathing, and squeezing the trigger. He had these printed on small cards and

required all instructors and students to wear them pinned to their sleeves.

The Small Arms Firing School was a success. In July the army instructed Mumma to extend the project to other army bases. Mumma immediately appointed Brookhart to the planning committee. Camp Perry instructors would select likely students as instructors at the new sites.

That summer at Camp Perry, the National Board decided to hold the annual match in September. Certainly this was a victory for Brookhart; the army could have protested that the matches would divert time and money from the war effort. But Brookhart wasn't satisfied. He pushed for the creation of a department of Small Arms Practice within the army. Under the current system all small-arms training was a specialization that required the soldier be sent away from his unit. The strength of Brookhart's proposal was that small-arms training would now become an integral part of all army duty and would allow men to stay with their units. The National Board adopted Brookhart's proposal, but the idea did not take shape.

NOTHER ITEM of business at the board meeting was the eventual closing of Camp Perry. Situated on the banks of Lake Erie, the camp was of no use once winter weather set in. Mumma proposed that the riflery school be moved to Jacksonville, Florida, at the end of November. Instead Congress appropriated money to build a new facility near Columbus, Georgia; this would become Camp Benning (and later, Fort Benning). In the interim, Camp Perry instructors were reassigned. Brookhart, newly promoted to lieutenant colonel, was sent to Camp Dodge near Des Moines.

Camp Perry had served well. Nearly six thousand officers had graduated from the school in just over five months. Years later Col. Harry L. Cooper, war-time commander of the 88th Division, acknowledged "the benefit of training under such men as Colonel Brookhart."

The new Infantry School of Arms at Camp Benning did not open its doors until February 1919, three months after the war ended. As the army began to scale back, some of the instructors returned to pre-war jobs. In February

American marksmen "prove their prowess" before French instructor, according to caption of Committee on Public Information photo, released in March 1918.





Standing amidst church ruins, March 1918, Secretary of War Baker and Major-General Charles T. Menoher, commanding officer of the 42nd "Rainbow" Division. Within a month, Secretary Baker's order for small-arms training would be carried out.

Mumma resumed his position in the military program at the State University of Iowa, where he would stay until 1928. Brookhart remained in Georgia for a few months as head of the marksmanship department. That summer, however, he was stricken with influenza and in the

fall he left the army to return to Iowa.

In the years following the war Brookhart continued to push for proper rifle training. As NRA president from 1921 to 1925, he spoke even more forcefully in support of the annual matches. The NRA presidency was the "great-

est honor accorded in the shooting game," Brookhart stated, and he promised to "represent the riflemen of America, and to aid them in developing the shooting game, wherein knowledge is power, just as it is in any other field of effort." Elected to the U.S. Senate in 1922, he exerted influence to ensure that Congress continue appropriations for the national matches.

Never content to sit on the sidelines, Brookhart joined Mumma and others to teach shooting techniques at matches at Camp Perry. The goal, as Mumma described it, was still to "provide instruction for the uninstructed in the use of arms," thereby "increasing their effectiveness as potential soldiers." In 1920, 842 shooters entered the school; within three years the number of entrants exceeded 1,000.

Yet the costs were mounting. By 1926 an economy-minded secretary of war eyed the \$500,000 price tag and refused to provide the funds. The match was held, but on a much smaller scale. The 1927 match faced the same problems.

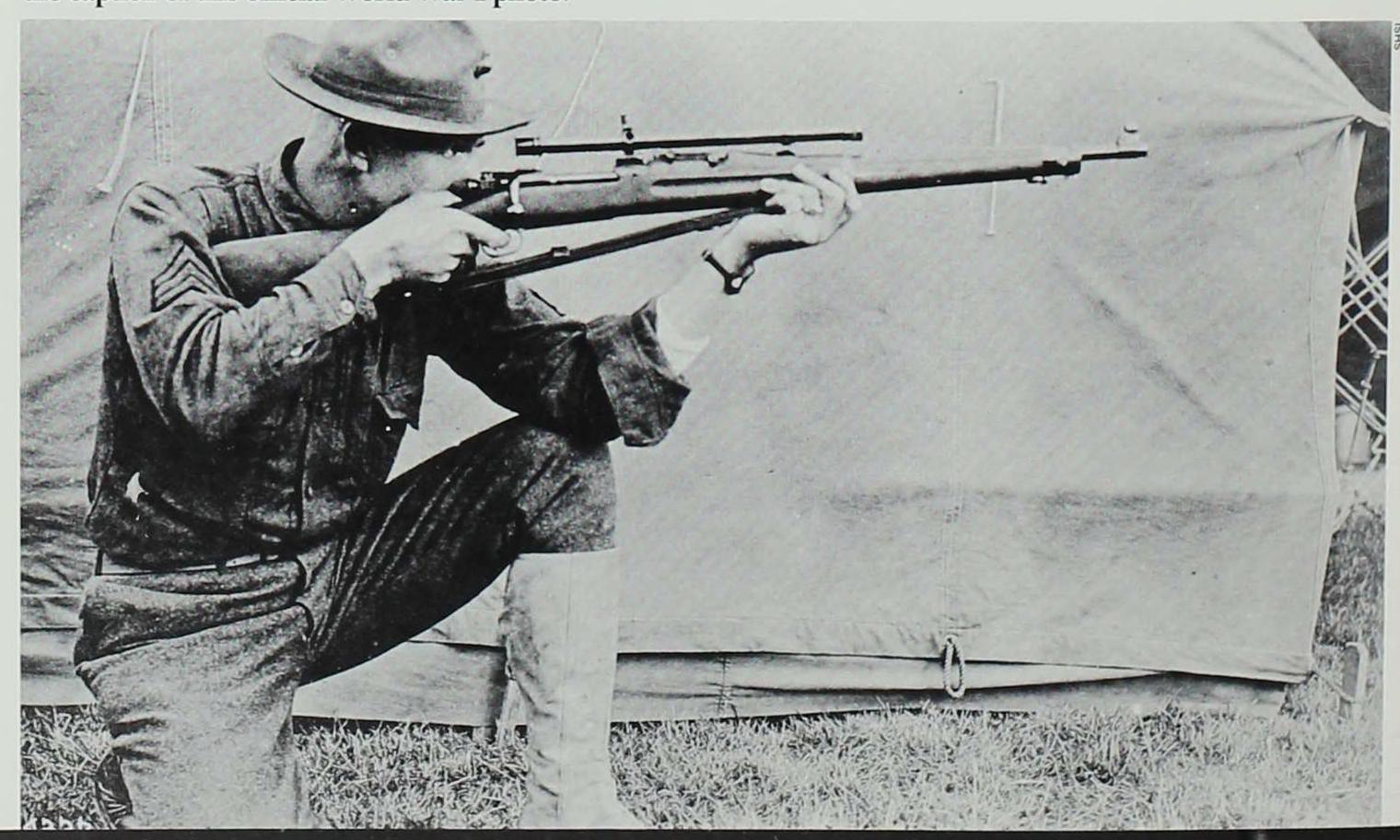
The NRA and National Board lobbied for legislation that would mandate the War Department to fund the matches. The first attempt was a bill introduced by Ohio congressman John C. Speaks. The Speaks bill

passed in the House of Representatives, but when it reached the Senate Brookhart added an amendment to enlarge the National Board. These added members would be appointed by governors of the states (who commanded the National Guard), an obvious attempt to tip the board balance away from the army. The president vetoed the bill because governors would have been appointing members to a federal board, thus violating the division of powers between the states and federal government.

A new bill was immediately introduced. Brookhart agreed not to offer his amendment, and the bill passed quickly and was signed by President Coolidge. The continuation of annual matches now seemed assured. But in 1931 the Great Depression did what match opponents had been unable to do. The matches were dropped.

N THE LAST fifteen years of his life, Brookhart ran unsuccessfully for the Senate in 1932 and 1936, served as a foreign-trade advisor in the Agricultural Adjustment Administration, and practiced law

"Sharpshooter with the United States Marines in France Equipped with the Latest Telescope Rifle Sight" reads the caption of this official World War I photo.



SECOND SECTION

THE BURLINGTON HAWK-EYE.

SECOND SECTION

BURLINGTON IOWA, SUNDAY MORNING, NOVEMBER 6, 1921.

He Taught the Army How to Shoot

A Sketch of Colonel Smith Wild- 17 2. 1147 and in 1174 they moved man Brookhart of Washington, Expert Trainer of Sharpshooters, School Master, Lawyer, Editor, and Politician.

By Alex R Miller

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Fmith remembers this clearly because he won a prise as the test spelley in Minnesota in 1876, and they started back in 1877, and they landed at fowaville, where they remained for eight years. This was their first resi-dence in Jown and it is to be rememberrd also, that Rmith and his father deave bark narriand, while the rest came by train. Smith then lived at his Grandfather Wildman's and went to whool He always had a hanker ing for whooling. His parents were I ath lefterers ir education and he attended whoul at every apportunity and like as many of those who had to struggle thinigh the old fashioned reaniry wheel in which the writer asks to pen him



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Burlington Hawk-Eye article (Nov. 6, 1921) attests that Brookhart knew "more about scientific rifle shooting than any other man in the army" and for twenty-seven years had "been studying the theory and trying out his ideas, and they have mostly been correct."

in Washington, D.C. He maintained his interest in rifle shooting but did not participate. When he attended matches it was in the role of an "old shooter" to whom respect was paid but whose time was past. Years before, the army had supplanted his Rifle Training in War with a new manual. He still was called on to test new military rifles, and on occasion he testified before congressional committees about new weapons. But in his testimony he tended to refight the old battles with opponents of marksmanship, and the committee seemed more courteous than interested. He died in 1944 in a veterans' hospital.

Rifle shooting was never a recreational activity for Smith Brookhart. Nothing really was. He approached rifle shooting as he did the other interests of his life, with a single-mindedness that bordered on obsession. His passion for rifle marksmanship, which began in Washington County, Iowa, had taken him to a national stage in Washington, D.C. In 1921 Alex R. Miller profiled Brookhart in a long article in the Burlington Hawk-Eye. Miller seemed to have a sense of the man: "He is direct, to the point of bluntness. He tells the truth. . . . If you do not like the way he does things, you may go your way, he will still go his." Having spent decades in an unrelenting crusade to establish rifle training, Brookhart was surely pleased that the article called him the man who "taught the army how to shoot."

NOTE ON SOURCES

Primary sources include records of the Iowa National Guard (State Historical Society of Iowa, Des Moines); the War Department and the Office of Adjutant General (both in the National Archives); the National Board for the Promotion of Rifle Practice (now the Department of Civilian Marksmanship, in Washington, D.C.); and William Howard Taft Papers (Library of Congress). Also see Congressional Record, 72 Cong., 2 sess., 1932/33, pp. 3959-60; U.S. Congress, Senate, Subcommittee of the Committee on Appropriations, "Hearings on H.R. 9209," 76th Cong., 3rd sess., 1940, 334-48; and Senate, Committee on Military Affairs, "Hearings on S. 3983," 76th Cong., 3rd sess., 1940, 50-63. A copy of Brookhart's Rifle Training in War (1918) is in the Brookhart Papers, State Historical Society of Iowa, Des Moines. Brookhart's family owns his 1917 diary. Numerous articles by or about Brookhart appear in Arms

and the Man (1908-1923) and The American Rifleman (1927-1928). Iowa newspapers used include Washington Evening Journal (1894-1912); Washington County Press (1916), and Burlington Hawk-Eye (Nov. 6, 1921). For secondary sources, see George William McDaniel, "Prohibition Debate in Washington County, 1890–1894: Smith Wildman Brookhart's Introduction to Politics," The Annals of Iowa, 45 (Winter 1981), 519-36; Iowa Official Register (Des Moines, 1911 and 1913); James B. Trefethen and James E. Serven, Americans and Their Guns: The National Rifle Association Story Through Nearly a Century of Service to the Nation (Harrisburg, PA., 1967); and Osha Gray Davidson, Under Fire: The NRA and the Battle for Gun Control (New York, 1993). An annotated version of this article is held in the Palimpsest files of the State Historical Society of Iowa (Iowa City).



Nevada, Iowa, about 1890. Ole K. Hill, Story County recorder, lived in Nevada—and died there in 1883 of leprosy.

Leprosy in Iowa The Tale of Ole K. Hill

by Richard M. Caplan

UST AS PERSONS IMMIGRATE, so do diseases. Thus it happened that a small number of persons carrying the disease we call leprosy came to Iowa in the middle 1800s. They were persons emigrating from the western part of Norway, where as many as 7 percent of the population may then have been infected. Many persons today think

that leprosy is a disease of the tropics, perhaps because most of the 12 to 15 million persons now infected live in the tropical or subtropical areas of Asia, Africa, or Latin America. The disease is still a problem, however, in the highmountain country of Nepal, more related to circumstances of poverty with its attendant crowding, malnutrition, and suboptimal sanita-

tion than to terrain, temperature, or altitude. And in the Middle Ages there may have been as many as 20,000 hospitals for people with leprosy in Europe, certainly including Scandinavia, and even north of the Arctic Circle.

Although the disease had vanished from much of Europe by the nineteenth century, the area near Bergen on Norway's west coast was still a locus of many patients. That nation's main leprosy hospital was located there, directed by Dr. Armauer Hansen. In 1873, when medical bacteriology was yet in its infancy, Hansen discovered that a bacterium caused the disease. (In tribute to the doctor's contribution to the understanding of leprosy, and of infectious diseases in general, the disease is now known as Hansen's disease. This name also attempts to avoid the enormous stigma that has been attached over the centuries to the names "leprosy" and "leper.")

Because the incubation period of Hansen's disease usually lasts several years, or even several decades, the infection could easily have been transported to the United States by persons who had no knowledge of their condition. And thus instances of Hansen's disease appeared in population centers of Norwegian immigration into the upper Midwest. In Iowa, Norwegians had settled in northeastern Iowa (especially Winneshiek County), central Iowa (northern Polk County and Story County), and north-central Iowa (Mitchell, Worth, and

Winnebago counties).

An 1886 report on Hansen's disease in Iowa, Minnesota, Illinois, and Wisconsin listed by name eight men who had died of leprosy in Iowa. Seven had died between 1863 and 1877, all in Winneshiek County. Because Iowa required death certificates starting in 1880, more can be learned about the eighth man, Ole K. Hill, who died in Nevada, Iowa, in 1883.

Hill had served as county recorder of Story County, having been elected as a Republican in 1874 and re-elected in 1876 and 1878. His handsome, florid signature yet adorns the records of land sales and mortgages for those years. His illness apparently began to interfere with his work and he did not stand for re-election in 1880. The obituary notices in the Nevada newspapers clearly suggested he had

suffered a lingering illness with much debility for months or years, during which he was nursed by his wife. (In those instances in which the illness leads to death, it usually occurs by gradual impairment of nerve function especially in the hands and feet, causing loss of sensation, which allows injury, ordinary infection leading to loss of fingers and toes, loss of weight, and ultimately, blood poisoning or pneumonia. Skin and deeper structures of the hands and feet are injured, burned, and infected, and become resorbed in the healing process; the notion of the skin simply "falling off' is incorrect.) Hill died August 17, 1883, just short of his thirty-ninth birthday. His death certificate, signed by Dr. P. Farrar, listed the cause of death by an ancient name for leprosy, "elephantiasis graecorum" and called it a complication of leprosy. The duration of the illness was given as ten years.

In a letter dated February 21, 1885, Dr. Farrar wrote to the secretary of the State Board of Health, "I have ascertained that Ole K. Hill came from Olen (pronounced nearly like 'Airlen'), District of Bergen, Norway, in the year 1866. . . . In Norway his occupation was that of a fisherman. . . . A sister (I think) died of it there many years ago. . . . His father, mother, one brother and two sisters, live in this county (farm name-Haugé), and betray no

symptoms of the disease."

Hill's prominence as former county recorder led to longer-than-usual obituaries in The Nevada Representative and the Story County Watchman, as well as formal, highly commendatory resolutions of condolence from three lodges in which he was active. The Nevada Representative said, "Mr. Hill was born in Norway September 22d 1844 and removed to this country in the summer of 1866, when he was twenty two years old. Although a man grown on arrival here, he at once assiduously went to work to acquaint himself with our language. To accomplish this he attended school at Des Moines several months, and because of his earnest desire and diligence he acquired such knowledge of the language of the country of his adoption that soon it could scarcely be detected from his talk that he was of foreign birth." In 1870 at census-time he was working as a helper in a variety store in Cambridge, Iowa. In

December 1871, "he married R. Kate Kinsell, with whom he lived happily until his death." Census records indicate that she and her parents were from Pennsylvania. There is no record of any children born to the couple. (The anglicized name "Hill," common among Norwegian families of this area, likely derives from the Norwegian original, Hauge/Haugen, meaning hill/s.)

It seems unlikely that the diagnosis was made or confirmed, in a modern clinical sense, by Farrar, who signed the death certificate. More likely is that Hill was acquainted with the manifestations of the disease from his earlier years in the highly endemic area around Bergen.

The infection never appeared among the Norwegian population born in this country. This fact was enormously important to Norwegian doctor Armauer Hansen's struggle to persuade the scientific world that the disease was a transmissible infection due to the organism Mycobacterium leprae, which he had described, and that it was not an inherited condition, which most medical authorities of the time firmly believed. So important was this observation that Hansen traveled to Minnesota in 1888 specifically to examine the offspring of émigrés with leprosy. He assured himself that none showed evidence of involvement. More years were necessary to completely bury such causative speculations as heredity, miasma, eating contaminated fish, or especially, divine retribution for moral lapse. Hansen's disease or even suspicion of it, perhaps more than any other historically known illness, has carried an enormous stigma perpetuated in Western society by biblical passages and artistic images. Even today, however, sin-plus-punishment remains a highly popular explanation for all sorts of medical afflictions, a too-ready answer for "Why me?" or "Why them?"

After Hill's death in 1883, it appears that there were no more instances of Hansen's disease in Iowa until after World War II. Since then, twelve cases of leprosy have appeared in Iowa. Two of these were native Iowans who had lived for several years in parts of the world where Hansen's disease is still prevalent. The other patients were mostly from India and southeastern Asia. The illness had come to an end in Norway and its émigrés much earlier.

Scientists long believed that Hansen's disease could be transmitted only by human-to-human contact. In recent years, however, researchers have proved that the same bacterium can infect both humans and animals. The first proven instance of Hansen's disease in a non-human primate appeared in a chimpanzee imported to the University of Iowa as a research subject from Sierra Leone, an area where many humans have the disease. The nine-banded armadillo, which has migrated into Texas and Louisiana from northern Mexico, also can be infected, and probably represents an animal reservoir from which humans can acquire the infection. Because the armadillo appears to be the only animal that can be infected easily, it also has provided for the first time an excellent opportunity for further research (including drug trials that could not ethically be performed on patients) and for the development of a vaccine.

The hazard of this infection in Iowa remains minuscule, and drugs can now usually control the infection. In other parts of the world, however, the threat is still serious. In fact, in 1991 the World Health Organization resolved to eliminate Hansen's disease as a public health problem by the year 2000. This would eradicate the disease that crossed the Atlantic with European immigrants a century ago, and that cut Iowan Ole K. Hill's life short at age thirty-eight.

NOTE ON SOURCES

News items or obituaries for Ole K. Hill appeared in the Story County Watchman (Aug. 17, 24, and 31, 1883) and the Nevada Representative (Aug. 22 and 19, 1883). The report on Hansen's disease in Iowa, Illinois, Minnesota, and Wisconsin was part of W. M. Gibson, Reports on Leprosy to His Hawaiian Majesty's Government (Honolulu, 1886), pp. 198-205. The first national disease registry ever attempted, the Norwegian national leprosy registry, begun in 1856, was still active at least until 1971. In 1856, the registry tallied 2,858 patients, the highest number alive at any time. See L. M. Irgens and T. Bjerkedal, "Epidemiology of Leprosy in Norway: The History of the National Leprosy Registry of Norway from 1856 until Today," International Journal of Epidemiology 41 (1973): 81–89. Other useful sources include W. L. Washburn, "Leprosy among Scandinavian Settlers in the Upper Mississippi Valley, 1864–1932," Bulletin of the History of Medicine 24 (1950): 123-48; R. M. Caplan, "The Importation of Leprosy into Iowa," Iowa Medicine (forthcoming); and J. R. Leininger, K. J. Donham, and W. M. Meyers, "Leprosy in a Chimpanzee: Postmortem Lesions," International Journal of Leprosy 48 (1980): 414–21...



Celebrate Our State

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The State Historical Society of Iowa (SHSI) announces a grant program funded by the Iowa Sesquicentennial Commission. This year SHSI will award up to 12 research stipends of \$1,000 each to support research and writing related to the history of Iowa or Iowa and the Midwest. Preference will be given to applicants proposing to pursue previously neglected topics or new approaches to or interpretations of previously treated topics. SHSI invites applicants from a variety of backgrounds, including academic historians, graduate students, and independent researchers and writers. Applicants will be expected to produce a manuscript suitable for publication in one of SHSI's publications, *The Palimpsest* or *The Annals of Iowa*. Applications will be judged on the basis of their potential for producing publishable work. Application deadline for 1994/95 academic year is June 30, 1994. Request applications or further information from:

Sesquicentennial Grants
State Historical Society of Iowa
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George William McDaniel is professor of history at St. Ambrose University in Davenport, and wrote about Brookhart and Company D in the Spanish-American War in "Martial Sons of Martial Sires", "in the Spring 1989 Palimpsest. His article on rifle training is from a chapter in his book-length biography of Brookhart.

SUBMISSIONS

The editor welcomes manuscripts and edited documents on the history of Iowa and the Midwest that will inform and interest a general reading audience. Submissions that focus on visual material (photographs, maps, drawings) or on material culture (artifacts and buildings) are also invited. Originality and significance of the topic, as well as the quality of research and writing, will determine acceptance for publication. Manuscripts should be double-spaced and follow *The Chicago Manual of Style*. Send two copies. Standard length is within ten to twenty pages, but shorter or longer submissions will be considered. Although *The Palimpsest* publishes brief bibliographies rather than footnotes, standard footnotes must appear in the original submission. When using newspaper sources, please cite page as well as date. Include a brief bibliographical sketch. Illustrative material is integral to *The Palimpsest*; please include photographs and illustrations (or suggestions). Send submissions or queries to Ginalie Swaim, *Palimpsest* editor, State Historical Society of Iowa, 402 Iowa Avenue, Iowa City, Iowa 52240 (phone 319-335-3916).

LETTERS FROM READERS

The Spring 1993 presentation of the Garbison photographs is excellent. Behind with my reading, I only discovered it last night and I enjoyed it very much. Archivist Becki Peterson has recognized the paucity of such photographic resources despite the availability of photography for decades before the turn of the century. She has recognized both Garbison's exceptional technical skill as well as his unusual foresight in preserving for his descendants the lives and activities of his era. For the last seven years I have worked at compiling genealogical records. I know that our families took photographs and that they had photographs taken ever since the Civil War. Yet few families have retained them, almost none can identify subjects, none have dates, and the use of a tripod was unknown. Garbison's lens quality and the tonality of the prints is the best pre-World War II amateur work that I have seen. I just wanted to thank you for your efforts. It is my first letter to The Palimpsest. I believe that many other readers must have enjoyed the article, but I know that few of us get around to writing. I just felt moved to respond.

Oscar C. Beasley, Iowa City, Iowa





Top: Now a restaurant and pub, the former Milwaukee depot in Adel holds 1920s memories of steam locomotives and traveling salesmen for *Palimpsest* author Robert Dyson, who writes in this issue about his jobs as engine watchman and agent-telegrapher. Below: The two-story Spirit Lake depot is now owned and operated as a museum by the Dickinson County Historical Society. In 1939, it was both workplace and home for Dyson and his father; the railroad provided living quarters for the station agent and family on the second floor. Two sets of tracks ran in front of the depot, and one behind. For more on mid-century railroading and telegraphy, see "Cleaning the Fires and Working the Wires" in this issue.

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