THE PALIMPSEST

EDITED BY JOHN ELY BRIGGS

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Telegraph Pioneering

"By Lightning!!" "Magnetic Dispatch!!" "Off the Iron Wire!!" "Telegraphic Flashes!!" Readers of Iowa newspapers published at Keokuk, Burlington, Bloomington (Muscatine), and Dubuque during the closing months of 1848 were astonished at seeing such incredible headlines. That communications could be sent long distances by means of electricity seemed unbelievable. Nevertheless it was a fact that several towns in eastern Iowa were in telegraphic contact with the Atlantic seaboard and important intervening places. Alert newspaper editors were the first to utilize the new invention.

In an issue of the Bloomington *Democratic Enquirer* for July 4, 1848, the editorial paragrapher announced, "BY LIGHTNING! As the post-holes for the telegraph are completed to Bloomington, we shall, probably, be able to give our readers 'News by Lightning', in the course of two or three weeks."

This appears to be the first newspaper intimation of the actual coming of the pioneer telegraph line to Iowa. On August 19th, the same paper contained the following item: "Two large coils of telegraph wire were landed here this week. Certainly many more days cannot intervene before we are in communication with the cities of the Union."

On August 24, 1848, the Burlington *Hawk-Eye* reported that the "Telegraph was put in operation for the first time yesterday, between this place and Bloomington, and we had the pleasure of conversing with our friends up stream by lightning. Next week we hope to be in communication with St. Louis and the eastern and southern cities." In the columns of the Bloomington *Democratic Enquirer* for Saturday, August 26, 1848, was a statement captioned THE FIRST STREAK. "We had the pleasure of sending our compliments, by lightning, to the Burlington 'Gazette', on Wednesday last. The answer was returned in a few minutes."

These exchanges of compliments may not have been the first telegraphic messages transmitted in or into Iowa, however, for on August 17th the *Hawk-Eye* contained an item to the effect that Dubuque and St. Louis had already "exchanged compliments by lightning." This statement, which was evidently based upon hearsay, is at variance with the generally accepted record that the first telegram received at Dubuque came from a facetious gentleman at Peru, Illinois, on September 15, 1848, and

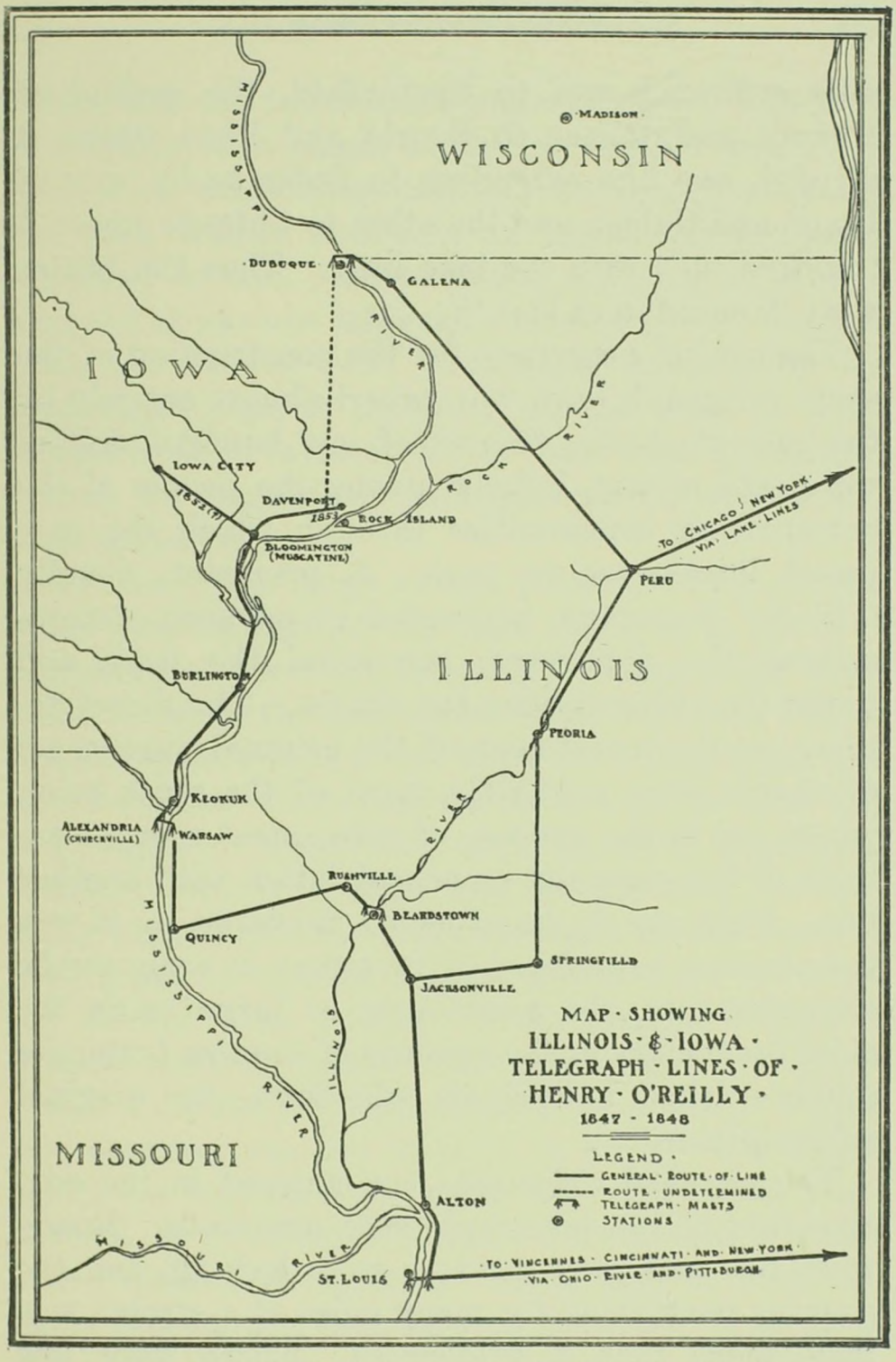
was addressed to the "ladies of the Waples House". The ladies in reply "flashed" their thanks to Mr. C. S. Oslere "for his burning communication", saying that "it warmed their cold hearts" and that they rejoiced to know they had "a 'spark' in Peru." Three weeks before the flirtatious greetings of the Dubuque ladies sang over the wire, the Bloomington *Democratic Enquirer* was using the telegraph for news service. Obviously the telegraph was to have social as well as commercial utility.

All this transpired in less than five years after the first electro-magnetic line in the United States was completed between Baltimore and Washington, a distance of forty miles, and toward the construction of which Congress appropriated thirty thousand dollars. It was on the twenty-seventh of May, 1844, that Miss Anne Ellsworth sent the first message: "What hath God wrought?" The line between Washington and New York was completed in 1846 and operated sufficiently well to demonstrate the practicability of the electro-magnetic telegraph as a means of long distance communication.

At this juncture, considerable effort was spent on the part of the promoters and patentees in a futile attempt to interest Congress in the development of the telegraph as a branch of the postal service. Failing in that they turned to private individuals to secure capital for the construction of new lines. At Rochester, New York, lived Henry O'Reilly, a newspaper man who realized that the telegraph need not

remain a scientific toy but might be used by newspapers in remote parts of the country with tremendous advantage as a means of "obliterating space and time". To O'Reilly belongs the credit of promoting and constructing more than twenty-five thousand miles of telegraph. The "lines of Henry O'Reilly" included the first line that crossed the Alleghany Mountains and four distinct lines touching the Mississippi River. Truly, he was the father of the western telegraph.

Between 1846 and 1848 telegraphic communication was extended very rapidly. O'Reilly built a line from Baltimore to Pittsburgh, thence down the Ohio River to St. Louis, and from Louisville to New Orleans where contact was made with a line running south from Washington to Savannah and from there west to New Orleans. In 1848 Ezra Cornell of Ithaca, New York, opened a line from New York City to Lake Erie where it joined another extending westward through Cleveland, Toledo, Detroit, and Chicago to Milwaukee. North from St. Louis, O'Reilly built the Illinois River Valley line through Alton, Jacksonville, to Beardstown, thence westward to Quincy, and then northward to Warsaw where the wire was carried across the Mississippi on tall masts to Alexandria. Crossing the Des Moines River, the line entered Iowa at a point near Buena Vista ferry south of Keokuk and proceeded northward through Burlington to Bloomington and beyond — possibly as far as Dubuque. From Jackson-



FROM A MANUSCRIPT MAP DRAWN BY BEN HUR WILSON

ville a branch ran to Springfield, the capital of Illinois, and thence to Peoria and Peru where it divided, one line extending to Dubuque by way of Dixon and Galena and the other to Chicago where it "hooked up" with the lake lines. Thus the States were "fenced in at last."

The capital necessary for the construction of the early telegraph lines was raised almost entirely by the sale of stock. Shares of one hundred dollars were sold at par, largely among the people of the enterprising communities through which the proposed lines were to pass. A promoter, usually O'Reilly in person, proceeded in advance, demonstrated the apparatus, canvassed the field, and wrote the subscriptions for shares. The direct returns on the investment of the original purchasers of shares were negligible, most of the stock being wiped out in the process of subsequent reorganizations of the company or consolidation with another line. This was to be expected, however, as it was the common experience of investors in early public improvements, the community at large being the chief beneficiary at the expense of the less fortunate public-spirited individuals who made the original subscriptions.

The physical difficulties encountered in the construction of the telegraph were numerous. Roads were few and poor, bridges were lacking, and the country penetrated for many miles at a stretch was little more than a wilderness. There were few

cities, and the towns were mere villages. The line, consisting of a single strand of number ten black iron wire, was strung listlessly along on such poles as were readily available en route, usually pine, hickory, or oak. These poles, differing in height and set at various intervals, were so poorly erected that the service was sometimes interrupted by passenger pigeons perching on the wire in such numbers as to break it down. The work of maintenance, in comparison with present-day standards, was unknown.

Crossing the large rivers presented one of the most difficult engineering feats involved in the construction of the early telegraph. Long poles were used to carry the line across small streams, but in spanning the rivers where there were no bridges tall towers called masts had to be erected so that the sagging wire would not interfere with steamboat traffic. Submarine cable had not yet been successfully manufactured. The telegraph masts were in fact gigantic wooden towers, guyed from all sides by strong wire cables. Their height depended largely upon the length of the span which was sometimes a distance of three-fourths of a mile. Where the crossing was too wide to be made by a single span, an intermediary mast was erected in midstream, or on a bar or island. Constructed of enormous dimension timbers, with a base as much as sixty feet square, they tapered gradually to an apex far above the ground. The tallest mast, at Paducah,

Kentucky, was said to have been three hundred seven feet high and erected on a bank thirty-two feet above the water. It supported a span of number sixteen iron wire weighing sixty-three pounds to the mile. The wire was strung in such a manner that its lowest point, not less than one hundred feet above the level of the water at high stage, was clearly out of danger.

These masts, an easy prey for "every stormy wind that blows", were the chief source of grievance to the superintendent of the lines and required so much attention and money to keep them in order that under-water cables were employed for crossing the streams at the earliest opportunity. It appears that a long delay was experienced in opening the line from St. Louis on account of the failure of the mast at Warsaw to withstand the ravages of the elements, for on August 31, 1848, the Burlington *Hawk-Eye* contained the following item: "The mast which was blown down at Warsaw some five or six weeks since had just been reconstructed, when the storm last week snapped the one opposite, at Alexandria, in two, and brought it to the ground. Our citizens have waited with commendable patience for a lightning communication with St. Louis and the East. It is hoped that the mast will be up today." The *Democratic Enquirer* of September 10th states that the "line of Telegraph between this place and St. Louis is now complete. The wire was broken by a recent storm, near Skunk River." It was not until

September 26th, however, that the *Hawk-Eye* stated, "The telegraph began to operate from the South last evening. We received news of the day before from New York". This, then, was the first distant communication received from below, and it is probable that the prospective line between Bloomington and Dubuque had not been completed at that time, because apparently no messages were coming through from the east by way of the northern circuit. Indeed, it is probable that the Bloomington and Dubuque terminals of the first telegraph lines in Iowa were never connected.

Fate and the elements seemed to be doing their utmost to discourage the "lightning messenger", for as the winter storms came on the line to the south, which was evidently poorly constructed, went down again and again. High water in the spring also caused many breaks which were a great disappointment to the newspapers. It was apparently not until near the end of April, 1849, that the recently established *Des Moines Valley Whig and Keokuk Register* was able to furnish its readers "with a few streaks of lightning". Even then telegraphic reports could not be obtained for the issue of the following week because one of the posts supporting the wire across the Des Moines River was down. "It is contemplated", read the account, "to run the wires opposite to this place and cross the river here." This change was made later and a mast was erected in Keokuk on the hill at the high-

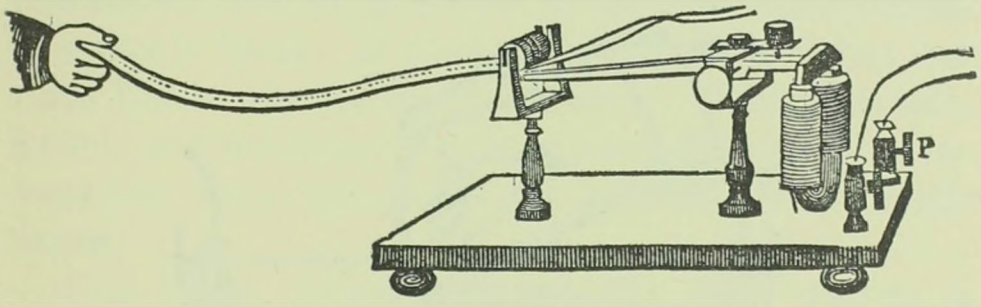
est point where High Street approaches the river, near the residence of a dyspeptic old Tennesseean who, according to a story related by J. M. Reid of that city, was easily and much annoyed by the continual buzzing of the taut wire spanning the river. On a particularly stormy winter night he was so much disturbed that he got out of bed, took a couple of drinks, seized his ax, went out to the mast, and after several hours of chopping in the darkness while the wind howled and no one was about, he succeeded in felling the structure.

Other amusing yarns are told about the early telegraph. One jocular wit convinced his curious country kinsmen that the high-strung wire was the city clothes line — the latest development in municipal enterprise. Isaac Johnson, of Fort Madison, doubtless in emulation of Benjamin Franklin's famous experiment with the kite, attached a string to the telegraph wire, tied an Irish potato to it, and under the potato he put a bucket filled with water, thinking that he would catch the news as the messages whizzed over the wires by observing the way in which the potato at the end of the string bobbed up and down in the water. It is not recorded, however, that any messages were ever received in that manner.

Insulation of the line was accomplished by various methods, the wire being as often suspended from a bracket above as supported from below. The modern type of glass insulator had probably not yet been

perfected, though bottle necks sometimes served the purpose. Lathe-turned wooden cups set over a wooden peg, with the space between cup and peg filled with a resinous substance which constituted the insulating member were commonly used. The insulators proved to be one of the most vulnerable parts of the line, as they afforded a tempting target, not only for the trusty guns of the hunters but for the slingshots of the youngsters as well.

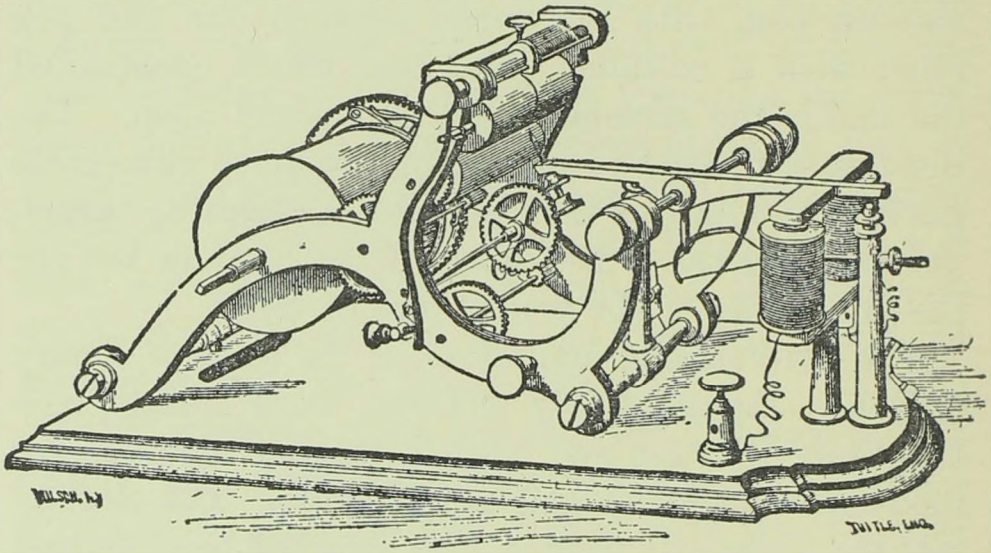
The instruments employed on the lines of Henry O'Reilly, though fairly efficient, were clumsy contraptions of brass and copper, lacking many of the modern refinements and adjustments. The electromagnet commonly used in 1844 weighed one hundred eighty-five pounds. The first receiving instruments were tape machines, similar in their method of operation to the tickers now employed by brokers.



SIMPLE MORSE RECORDING APPARATUS

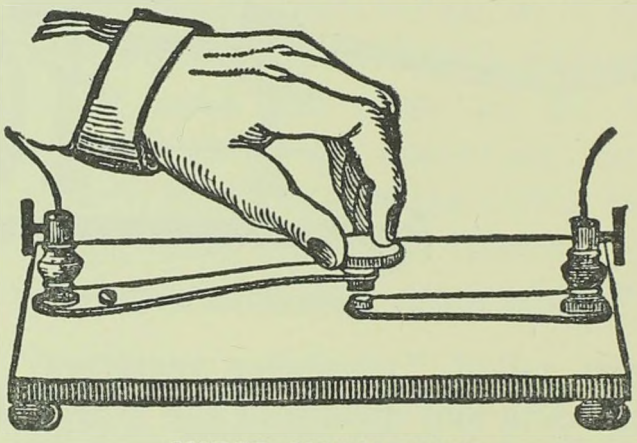
They were called "receiving registers" and imprinted the dots and dashes of the Morse code upon a narrow tape of paper ribbon as the message "came in over the wire". At first the tape was drawn through the machine by hand, but later a

clock-work mechanism was substituted, whereupon the operation of receiving became automatic. The



AUTOMATIC MORSE REGISTER

operator permitted the tape to slip lightly through his fingers as he deciphered the messages, the method of reading by listening to the "sounder"



MORSE SIGNAL KEY

being then unknown to the telegraphic profession. The "key", or "sender", was then, as it is now,

little more than a circuit breaker of the simplest form.

In case of a severe electrical storm the line was "grounded" by throwing a knife-switch outside of the office, but occasionally when storms came up suddenly the operator was taken by surprise and considerable damage was done when a bolt of real lightning entered unannounced. The newspapers seemed to take delight in any predicament of the telegraph and lost no opportunity to ridicule the new device for "the dissemination of human intelligence". On November 4, 1848, the Bloomington *Herald* announced: "In consequence of the thunder storm of yesterday we have no later telegraphic news than that contained in our dispatch of the day previous. A strange flash of lightning entered the office at Burlington, and not knowing just how to use the little brass machinery, went to work on the operator's hand. It discovered its mistake, but not until the hand was badly burned." Thus the telegraph, not unlike a more modern "Universal" conveyance, bore the brunt of contemporary witticisms.

This levity, however, eventually gave way to a more serious impeachment of the service, as often deserved as not, for the telegraph lines were frequently out of order and developed the exasperating habit of breaking down upon the eve of some important event. The intermittent service was always resumed with apologies and renewed promises. It

appears also that telegraphic communication was not always accurate and was sometimes used for partisan political purposes. To discredit telegraphic news the politicians dubbed it the "tell-lie-graph".

Prior to the advent of the telegraph it had been necessary to wait two weeks or more to learn the final result of a Presidential election, but with electrical communication the outcome could be ascertained in a day or two. When a message came to Bloomington announcing the election of Zachary Taylor in 1848 a staunch Democrat declared it was a Whig lie because the outcome could not be known so soon. Refusing to believe that the telegraph really worked, he bet on Lewis Cass — and lost.

Within a few years, when the telegraph became commonplace, some of the more alert people who frequented the register offices perceived that they could detect certain calls by the sound of the register. Thus began an important innovation in telegraphy, for "ear reading" without reference to the tape soon developed. A new school of operators using simpler instruments was the result. Strange as it may seem, the old tape readers were unable to master the new method of sound reading except with the greatest difficulty. Indeed, many of them found it entirely impossible to change to the new system and were eventually compelled to give up their occupation as the sounder became almost universal.

Connected with the early telegraph throughout the country were many notable men, employed both as builders of the lines and as operators or superintendents after the telegraph actually began to function. Almost without exception they were men of keen foresight and high character. Building the pioneer telegraph was, indeed, a task to daunt the courage and test the energy of the boldest spirits. No man associated with the western lines contributed more to the development of the telegraph than Henry O'Reilly. Although he encountered serious opposition and competition he usually emerged victorious because he possessed the reputation of being able to achieve results while others only promised and offered alibis.

The first operators in Iowa were apparently well liked in the community. S. Haight, at Burlington, was especially "accommodating and courteous" when it came to furnishing the local papers with the latest news dispatches from up and down the river. The operator at Keokuk was "one of the most gentlemanly and courteous" on the line. Outstanding among those men who journeyed into the far-western country to take charge of the newly opened offices was a young man of twenty-three, Oliver Hudson Kelley, born in Boston and boasting kinship with Oliver Wendell Holmes. It was his good fortune to be assigned to Bloomington, then a thriving river town, where he acquitted himself in such an exemplary manner as to merit the unqualified praise

of all with whom he came in contact. After the Presidential campaign of 1848 the Rock Island *Adventurer* thanked Mr. Kelley publicly, "for the efficient manner in which he has handled the news during these exciting times." He opened a station in the small one-story building at that time used as post-office, located on the north side of Second Street between Iowa Avenue and Sycamore Street, on the site where Tremont Hall was afterward erected. Eventually he married the postmistress, Lucy Earll, farmed in Minnesota, served for several years in the government departments at Washington, and after the Civil War founded the agrarian order of the Patrons of Husbandry, thereby becoming the father of the National Grange for which he is best known and widely honored.

Newspaper men were not the only people who welcomed the inauguration of telegraphic service on the frontier. The general public eagerly took advantage of the "marvelous facilities" offered by the "magnetic telegraph" as a means of ascertaining the latest news from distant points, messages being transmitted in every language except Greek which evidently "confounded the lightning". In the springtime the steamboat men below anxiously awaited telegraphic news from above concerning the going out of the ice and the stage of the river. Farmers and merchants ascertained the state of the market at St. Louis and elsewhere by wire relayed by boat or stage to the towns "off the iron cord".

In May, 1848, the Davenport *Gazette* published the New York market reports only seventy-two hours late, the quotations having been received "by lightning" at St. Louis and thence conveyed up the Mississippi by mail packet. "That is quick work", commented the editor, "but we expect soon to receive the news from New York in shorter time."

The total number of messages transmitted in September, 1848, over the Illinois and Iowa lines was in excess of two thousand, which was double the number of the preceding month. At first many of the news messages copied by the papers were furnished gratuitously by the operators who were anxious to popularize the telegraph and to gain personal favors for themselves, but news agencies were soon organized and the editors were compelled to pay handsomely for the privilege of receiving dispatches. A notice inserted in the columns of a local paper by Mr. Kelley advised the citizens of Iowa City, Davenport, and Rock Island of the vast importance of the Bloomington telegraph. "Messages of ten words or more, can be mailed to the Operator at Bloomington, and there forwarded by wire to their destination; answers as soon as received will be forwarded by the speediest conveyance." Moreover, any number of persons, clubbing together, and remitting weekly, in advance, the sum of six dollars, will receive dispatches, daily, of all the current news, arrival of Steamers, Market Reports, etc."

Newspaper advertisers were also quick to take

advantage of the popular interest in the new invention and employed telegraphic catch-phrases liberally in the preparation of their copy. Drug stores, saloons, and eating houses seemed to be particularly adept in their advertising methods, often heading their columns, "BY TELEGRAPH!!" and otherwise utilizing the lingo of the wire to beguile the unwary public into reading their advertisement. "LIKE THE TELEGRAPH", headed an item in the Muscatine *Journal* which purported to be a letter to W. B. Sloan. "Dear Sir:" it began, "Your ointment goes 'like the telegraph'. Enclosed please find cash for the payment of two dozen of your Horse Ointment, one dozen of your Family Ointment", and so on down the list of Sloan's famous remedies.

Legislators also realized the possibilities of the telegraph as a boon to the remote and scattered centers of population throughout the Commonwealth. Sensing a rapid expansion of the service, the Third General Assembly enacted a chapter in the *Code of 1851* providing for the use of the public highways of the State by responsible companies, and for securing right of way across private property upon the payment of adequate damages.

These contemplated extensions of the telegraph did not materialize as rapidly as anticipated, however, to the great disappointment of numerous growing communities. The original service became spasmodic and lethargic, to be attributed mainly to

the disintegration of the line. The "lightning" was out of commission more than half the time during the first few winters. Some of the operators were of an irresponsible type who took no personal pride in the institution they represented and cared little about the quality of the service rendered. The decade between 1850 and 1860 was characterized by business disintegration rather than by improvement, while the unstable political situation likewise contributed to the vacillating policy that brought the telegraph company into disrepute.

It was especially desirable, however, that telegraphic communication should be established with the capital of the State, and a line may have been built to Iowa City sometime during the years 1851 or 1852. That this line was in operation in 1852 there can be little doubt, for the *Republican,* an Iowa City paper, of April 14th that year carried "Telegraphic Dispatches" which were not attributed to any other paper. Moreover, a Telegraph Directory published in New York in 1852 listed Iowa City as one of the stations to which telegraphic service was rendered. The rates to the various Iowa stations were as follows: for ten words from New York to Burlington, $1.35, to Bloomington, $1.50, to Dubuque, $1.40, to Iowa City, $1.75, to Keokuk, $1.50, and to Muscatine, $1.55. For each additional word the charge varied from six cents between New York and Dubuque to eleven cents between New York and Iowa City. Apparently the eastern authorities had not yet dis-

covered that the name of Bloomington had been changed to Muscatine in 1849 and that these stations were one and the same though the rate differed.

Davenport was not on the original circuit, although efforts were made in that city to promote a branch of the line during the summer of 1848. It was not until 1853, however, that the "lightning messenger" arrived. The first line built into Davenport came up the prairie road from Muscatine through Sweetland Center, Pleasant Prairie, and Blue Grass. This road, entering Davenport off the end of Taney Street, was subsequently known as the Telegraph Road. At the same time the line was being built into Davenport from the south, another line was projected west to Rock Island from Peru, to secure the services of which the people of Davenport were asked to construct the "gutta-percha crossing" under the river from Rock Island at an estimated cost of a thousand dollars. On November 18, 1853, the Davenport *Iowa Democratic Banner* stated that the "telegraph line from Peru to Rock Island was completed yesterday." Moreover, continued the comment, the "old fogy method of stretching the wire across the river has been abandoned, the strand is to be submerged. The line between this place and Muscatine has been put in complete repair, but the office has not been opened at this point. When the two lines, to Chicago and St. Louis, are completed we will stand a chance of being always up with the times."

By 1853 the railroads were beginning to radiate out of Chicago in every direction, with the result that the old alignment of the telegraph routes along the rivers and highways was rapidly abandoned in favor of the railroad routes. The Burlington *Iowa State Gazette* announced on December 23, 1853, "We understand that the Telegraphic communication between this city and Chicago is now completed; so that we now have a spirit medium of intercourse with the cities of the East. The office is on Jefferson Street, near that of the Gazette." It is evident that the Illinois and Iowa telegraph line was fast falling into a state of disintegration from which it was never revived. In 1856 Hiram Sibley and Ezra Cornell organized the Western Union Telegraph Company by consolidating several weak independent lines. Within a decade the new corporation grew to be a veritable giant, proving beyond a peradventure what every one said could not be done — that it is possible in the world of commerce to forge into a strong chain many weak links. A new line built up the Mississippi River in 1865 by the Illinois and Mississippi Telegraph Company competed with the Western Union for a short time but eventually the telegraph business of the cities and villages of Iowa as well as the rest of the country was left to the organization supplying the most universal service.

Ben Hur Wilson