IN 1839, ten years before Minnesota Territory was organized, a remarkable invention was made public by the French government. Louis Jacques Mandé Daguerre, a scene painter who managed the popular Diorama in Paris, devised a method for the "spontaneous reproduction of the images of the camera obscura." This technique was the daguerreotype—one of the first ways of making photographs.

In a manner almost unparalleled, the French government bought Daguerre's invention and presented his secret technique to the public. On August 19, 1839, in the Palace of the Institute of France, the famous scientist François Arago described the process in detail. Within days, daguerreotypes were being taken in France, and within weeks in America. As early as September 16, a daguerreotype was made in New York.
Something about the daguerreotype appealed to Americans, and they developed the process to its highest point. Even Europeans admitted that American daguerreotypes were superior in quality to those produced in any other country. American daguerreotypists were so moved by the death of Daguerre in 1851 that the members of the New York State Daguerrean Association wore black bands of mourning on their left arms for a month, and they were the first to raise money for the erection of a monument to Daguerre.

Popular enthusiasm brought the so-called "Daguerrean Artist" to every substantial settlement in the United States. The farther west these pioneer photographers traveled, the more welcome they were, for nothing served better to preserve the memory of distant loved ones than their likenesses on daguerreotypes.

The daguerreotype process was not difficult to learn—a few weeks' instruction was enough to put a man (or a woman) in business. And the returns were good. For example, in 1844 a certain George Reed spent four weeks learning the process from Anson Clark of West Stockbridge, Massachusetts. The first five weeks after he "graduated" he earned an average of fifteen dollars a week—an excellent income for those days.

To make a daguerreotype, a plate of silvered copper was first polished mirror-bright with rottenstone, jeweler's rouge, and a long sword-like buff stick. Then, in semi-darkness, the plate was laid over the open top of a box which contained particles of iodine. The fumes of this chemical, at room temperature, turned the silver surface of the plate to light-sensitive silver iodide. This coating operation was then repeated with bromine or chlorine. The plate thus prepared was put into a light-tight case, or plateholder, and transferred to the camera, which previously had been adjusted on its stand. After an exposure of, say, twenty seconds, the plate was developed by subjecting it to the fumes of heated mercury. Almost magically, a picture appeared. A wash with the chemical sodium thiosulphate, a rinse with water, a quick drying over an alcohol lamp, and the picture was complete, ready to be given to the customer. Because the surface was extremely

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THE Suspension Bridge between Nicollet Island and Minneapolis
Indian camp on the site of Bridge Square, Minneapolis, 1854

fragile, it had to be protected behind glass in a case. These were usually made of leather, papier-maché, or a plastic composed of pressed sawdust, shellac, and lampblack, and they were often very attractive.

Daguerreotypes were produced by the hundreds of thousands before glass negatives were perfected. Since an unlimited number of paper prints could be made from a glass negative, it had a great advantage over the daguerreotype, which it displaced about 1860. Now, after the passing of almost a century, we are just beginning to discover that daguerreotypes preserve some of the most vivid and beautiful pictures of America in the mid-nineteenth century.

Most daguerreotypists did not sign their pictures, and so their work remains anonymous. Indeed, some of the finest daguerreotypes the writer has seen in the course of a nation-wide search cannot be traced to any particular photographer. Among the handsome and unusual daguerreotypes examined are those owned by the Minnesota Historical Society. Its treasures include some remarkable examples of the silver pictures which Oliver Wendell Holmes once described as "the mirror with a memory."

Like those seen elsewhere, most of the Minnesota daguerreotypes cannot be credited to a specific daguerrean artist. Fortunately, however, a good deal is known about the most famous local daguerreotypist, Joel Emmons Whitney. The society has both a fine portrait of Whitney and an original view of his St. Paul gallery. They are reproduced herewith. There is no evidence that any of the Minnesota landscapes among the society's daguerreotypes—which include views of Fort Snelling, the Falls of St. Anthony, and the Suspension Bridge across the Mississippi—were produced by Whitney or by his companion in his early photographic adventures, Alexander Hesler. But the latter did leave several accounts of his trips to the upper Mississippi country in 1851 and 1852, so we know where the two men went and what pictures they took.

When Whitney, who was born in Phillips, Maine, in 1822, arrived in St. Paul with his father in 1850, he knew nothing about photography. It was only a year later, however, that he met Hesler at the Falls of St.

The portrait was copied photographically from a daguerreotype owned by Whitney's daughter, Mrs. S. J. Joy of North St. Paul.

Daguerreotypes of St. Paul and of the Falls of St. Anthony made by Whitney in the summer of 1853 were engraved on letterheads. The Minnesota Historical Society has several examples. Its collection includes also a large color lithograph of St. Paul in August, 1853, which bears the legend "daguerreotyped by J. E. Whitney."
Anthony. A professional daguerreotypist with four years of experience, Hesler owned a gallery in Galena, Illinois. He had traveled to St. Paul on the steamboat “Nominee,” taking “views,” as he called his daguerreotypes, for Harper’s “Travellers Guide”—a book which, according to its prospective publishers, never materialized. Captain Orrin Smith of the “Nominee” had allowed Hesler to daguerreotype from the pilothouse, and the resulting pictures may well have been the earliest snapshots taken in America. Unfortunately, no trace of these pictures has been found.

Hesler had devised a method of hyper-
sensitizing his plates so that he could take exposures in a fraction of a second with a homemade drop shutter pulled across the lens by a rubber band. On the trip in the spring of 1851, Hesler made the “first Daguerreotypes of St. Anthony falls ever taken”—and Whitney became his pupil. The following summer the St. Paul pioneer went to Galena and took lessons in the art of making daguerreotypes.

A year later, in the summer of 1852, Whitney again met his friend and teacher at St. Anthony. “Before leaving Galena,” Hesler recollected many years later, “I constructed a square tent, or darkroom, of dark cambric, in which to coat and develop the plates.” This, with “an ample supply of carefully galvanized plates, buffing and coating boxes, etc., made up the outfit, all of which was contained in a large packing trunk.”

The friends lugged this outfit all day through the countryside. Hesler never forgot this photographic field day because—to his complete surprise—one of the pictures of Minnehaha Falls taken at that time fell into the hands of Henry Wadsworth Longfellow.

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3 Most of the material about Hesler’s Minnesota visits that follows is drawn from a letter he wrote in the late 1880s to Captain Russell Blakeley of the St. Paul Pioneer Press. Another letter relating to the same subject was published in the Philadelphia Photographer, 13:67 (1876), and in the Chicago Tribune, July 7, 1895; and Hesler also wrote an account for the Photographic Times, September 2, 1892. The trip to the upper Mississippi was given brief contemporary mention in the Photographic Art Journal, 2:50 (1851). See Robert Taft, Photography and the American Scene, 471, n. 110 (New York, 1938).

4 Photographic Times, September 2, 1892.
Longfellow, who it is said found in it the inspiration for his famous Song of Hiawatha. It was the poet’s interest in this picture which caused Hesler to recount many times over the experiences he and Joel Whitney had shared on the trip. One of his most picturesque reports is in an undated letter addressed to the St. Paul Pioneer Press and probably written in the late 1880s, which is now in the society’s collection.

In it Hesler relates that after returning to Galena George Sumner, who also had been visiting the upper river, called on him and wished to see the views taken there. “I gave him several,” writes Hesler; “among them was one of Minnehaha that he admired above all the others.” Not until 1856, however, after he received a signed presentation copy of Hiawatha, did Hesler learn that Sumner took the picture East with him and gave it to his neighbor, the poet Longfellow. According to Hesler’s letter, the poet took the view “out in the woods with him and from it conceived the thought and poem of Hiawatha.”

Fortunately, Hesler also included in his letter a detailed review of the events of August 15, 1852, when, with Whitney, he “left St. Paul at 4 A.M. for a day viewing.” He continues his report as follows: “At 6 A.M. we pitched our viewing tent on Hen-nipin [sic] Island, and began operations. Mr Whitney buffing & coating the plates while I selected the views, made the exposures — and developed & fixed the plates. By 10 A.M. we had secured 30 fine views.

“We were so absorbed in our work, & elated with the scenes — that we had taken no thought to the wants of the inner man — but as we were preparing to leave the Island, we Stumbled across a Small [boy] — who was munching away at a huge ‘Dough Nut’ — Then we were awful!! hungry — and interviewed the young man as to where he procured such a delicacy — To which he replied ‘Down There’ pointing through the Thicket to the lower end of the Island, which was at that time thickly covered with woods & underbrush. We ‘Down There’ found a squatters cabin in which was a woman busily cooking the said Dog[nuts]; a large plateful standing on the table These we exchanged for fifty cents, and made for the Ferry above the Falls. The ferry was Propelled as all early settl[ers] will remember by a rope stretched across the river to which the boat or Scow, was attached by ropes & Pulleys, and as the forwart [sic] part was shorten[e]d up & the stern let out, the force of the current pro­pelled the thing along.

“On the west side where now stands the Beautiful City of Minneapolis! not a house was to be seen, save a tumbledown unin­habited log cabin near the edge of the falls, which site is now cover[e]d with those huge flowering [sic] mills whose products feed so many millions.

“On the west side we went to the Bluff
below Spirit Island & made several views looking up the river; taking in the whole fall, spirit Island, St. Anthony, & Nicol[l] et Island this I still have in my Possession.

"At one P.M. we started for Minnehaha. Arriving there, we prospected for the best view, and selected that from the upper side where the bluff makes a turn south, where, looking west you face the fall, with the gorge in the foreground. The fall in the middle—& the rapid with the country beyond [in] the distance. Here after cutting down two trees we had an unobstructed view and secured 25 or thirty pictures. While at work, a man from the Emeral[d] Isle, who had built a claim shanty just north of the fall, discovered our tent and came up with anger in his voice, and fire in his eye—exclaimed—'And what are you doing here jumping me claim.' After assuring him that on the contrary we were only doing that which would make the place famous and known over the civilized [sic] world with this explanation [sic] he became our obedient servant and procured us a jug of cold water that flowed out of the rocks at the foot of the fall on the South side.

"We the[n] went to Ft. Snelling & took that. Then crossed the St. Peters [Minnesota River] and climbed the Bluff back of Mendota. From here we took St Paul with the junction of St Peters & the Mississippie [sic] in the foreground and the great river with its Islands in the middle[e] & St Paul & surroundings in the distance. The air was clear as Crystal & ev[e]rything was sharply & Clearly defined over the entire distance. All I had of these [views] were destroyed in the great Chicago fire (It is possible Mr Whitneys effects may contain some of these)."

"The view from this mound is or was beautifully grand!! We reached the Hotel at St Paul at 10 P.M. with only the plate of D[o]ughnuts and a small jug of Coffee & Cold Spring water for the long days proven­der, having secur[e]d over Eighty fine views."

On this summer excursion of 1852 Hesler and Whitney must have set a record for daguerreotyping outdoors. In another account, published in the Photographic Times for September 2, 1892, Hesler states that they made some views on daguerreotype plates of full size (six by eight inches), and others on plates of one-sixth size (two and three-fourths by three and one-fourth inches). The camera for the larger plates was a mammoth affair, and the sheer labor of dragging it around must have left the two friends worn out. Small wonder that forty years later Hesler wrote that this was "the longest and hardest day’s work I ever did!"

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Whitney died in January, 1886.