



William Watts Folwell and
Family Papers.

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Lincoln, Nebr., Aug. 11, 1911.

Dear Dr. Follwell:

I am just in receipt of your letter of the 9th inst., making inquiry as to Joseph R. Brown. I am delighted to hear from you. Of course you do not remember, among all the thousands of young people to whom you have talked during your connection with the University of Minnesota, one so humble as myself, but I used to know you very well. A long time ago, it seems like many years.

I am a native of Minnesota and of Hennepin county. My grandfather and father being among the first settlers in that county. At one time I contemplated entering the University of Minnesota, but changed my plans for which change I have since had many regrets. But to answer your letter--

I made a special effort a few years ago to learn all that could be learned of Joseph R. Brown and his famous steam wagon. I remember of hearing my father tell of one of these wagons that stood out on the prairie near New Ulm, Minnesota, as I remember it, at the time of the Indian massacre.

So after coming to Nebraska and hearing of the steam wagon here I at once became especially interested. I was at the time associated with the late J. Sterling Morton, but not until some time after his death did I get all the facts about the proposed steam wagon road to Denver. The wagon itself was left at Arbor Lodge, the farm home of J. Sterling Morton where it remained many

years but it was finally broken up and sold for old iron, the boiler being used for a time in the gas plant at Nebraska City.

I have been unable to find so much as a piece of the wagon during all my research. Nor have I been able to learn anything material of Mr. Osborn. I have, however, quite a lot of stuff that I think will be of interest to you and I will get it together and send it as soon as possible. If you are in a hurry kindly drop me a card and I will attend to it at once. If, however, you are in no special hurry I would rather wait a little as I have some matters that are pressing just at this time.

Very cordially yours,

Clarence S. Rame
Secretary

Dr. William W. Follwell,
1025 St., S. E.,
Minneapolis, Minn.

CSP-NP

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GRANT G. MARTIN
Attorney General of Nebr.

Lincoln, Nebr., Oct. 6, 1911.

Dear Dr. Folwell:

I am properly ashamed of myself for not having furnished you the promised information regarding the Joseph R. Brown Steam-wagon, but it is due to the fact that we are short of office help and this material has had to be copied.

I am sending you now a number of excerpts from the newspapers of that time. I have also some very interesting correspondence in reference to this matter, which I shall have copied for you as soon as possible.

Yours very truly,

Dr. William W. Folwell,

10 Twenty-fifth St., S. E.,

Minneapolis, Minn.

Clarence S. Paine

Statement of Joseph R. Brown
relating to his Steam Wagon,
Oct. 18. 1869

Addressee, unknown. 7 pp. 8 ms.

New York, York .Oct.18.1869.

Original seen
again 20/7/201

In 1859 after the Hudson's Bay Comany commenced bringing their goods by way of St. Paul the business created thereby induced me to build a steam wagon to run over that route, so well adapted to the use of steam as a traction motor. The steamer then built as an experiment after some improvements from the original plan, proved beyond all doubt, the feasibility of transporting freight by steam power over a common road.

With all the imperfections attending the construction of an experimental machine, one drew behind it thirty tons of freight and ascended a grade of over 200 feet to the mile. The machine was thoroughly tested, by passing over plowed ground, and through snow, in some places two feet deep, performing its work well. The only great fault in its construction being that it was so geared as to run but about $2\frac{1}{2}$ miles per hour, and had not facilities for carrying water to serve more than one hour. The latter difficulty could have been remedied by constructing an additional tank, but as I could not arrange for transporting the Hudson's Bay freight and there being at that time no other business in the prairie portion of North-western Minnesota the machine was laid up.

Satisfied with the success of the first experiment I, in 1862, built a second steamer which I proposed to use between Nebraska City and Denver where there was a large amount of transportation. This steamer was built with improvements suggested by the use of the first one, and the success of the tests made with it at Nebraska City was so satisfactory that the ^{Otoe} Otoe County, by almost a unanimous vote of the inhabitants voted an appropriation of ¹⁷⁰⁰⁰ \$17000 for the improvement of the road and the construction of bridges on the line of the road in that county, which covered nearly all the broken country between Nebraska City and

Denver the valley of the Platte being a level plain. This steamer was not so heavy as the first, and the power was so attached as to give it a speed of $4\frac{1}{2}$ miles drawing ten tons. After this motor had started on its first trip to Denver an imperfection in welding the iron in one of the cranks, caused it to break, and there being no shops in that country where proper iron could be obtained to repair the broken crank I immediately returned to New York, to have the crank repaired ^{+ order} four additional steamers, and then proceed to Minnesota to transfer the first built steamer to Nebraska City. Before I reached Minnesota, the Indian Massacre had taken place, my entire family had been taken prisoners and my house in which most of my funds had been unfortunately placed was destroyed by fire. These misfortunes interrupted my steamer wagon arrangements. The order for the new steamers was countermanded. The one in Nebraska City laid up, and I entered the service in the war against the Indians, in which I was employed actively until its close. Before I found myself in a condition to resume my steam-wagon operation in Nebraska the war horse was prancing across the prairies where I expected to operate. I then determined to await the construction of the St. Paul and Pacific road which would reach the portion of our North Western Prairies adapted to the use of the Steam wagon. That road is now "out of the woods" and by the 1st of May next will reach its terminus on the Bois des Sioux river, from which point to Fort Garry in the Territory formerly owned by the Hudson's Bay Company, a distance of over 300 miles, the land is an uninterrupted plain, level as a barn floor. The route I propose to use between those points is prairie, but as it follows the general course of the Northern Red River is well supplied with timber. There are many streams to cross but ~~none~~ that exceeds *fifty*

feet, and but few that exceeds twenty feet in width and they are all without hills on either side, being apparently washed channels through the level plain. The country is free from rocks, boulders or other impediments in the way of using a steam wagon. But few soft or swampy places occur, the soil being a tough sandy loam over which the goods of the Hudson's Bay Company and others have been transported in wagons and carts a long series of years, and yet in very few places has the soil been cut through. With the exception of a few boulders to be removed on a portion of the route, the country is well adapted for steam transportation from the Bois des Sioux to Fort Ransom on the Cheyenne and to within 12 miles of Fort Wadsworth on the Couteau des Prairie.

From the mouth of the Goose or Turtle Rivers to Fort Totten (Devil's Lake) the country is also well adapted for the use of the steam wagon there being but little more to do than to remove boulders from the road. The main route to Fort Garry, and the branch roads above specified, will, estimating the business by that of the past two years, cover transportation during next summer and autumn amounting to about three thousand tons, heretofore done with ox teams. That the business down the Red river will rapidly increase, while the supplies for the troops and Indians must be continued, there is no doubt; neither do I doubt that work for steam wagons may be obtained on routes from Fort Garry up the Assiniboine and Saskatchewan rivers to the base of the Rocky Mountains, the country being, as I understand, generally level or slightly undulating and well adapted to the use of steam-wagons. But without speculating upon future contingencies, it is sufficient, for the present, to know that there is an existence of 3000 tons transportation business which will employ from the 1st of May to the 31st of Oct. about eight wagons capable

of running 100 miles in twenty four hours drawing ten tons burden.

Probably from two to four steamers would do the business during the winter. By a close calculation of the cost of transportation (as per accompanying table) and the earnings for transportation the work will give a net profit of from ~~\$~~75,000 to \$ 90,000 at the very lowest estimate.

I desire to put eight ¹⁰ ton steamers to work by the 1st of May next at the terminus of the St Paul road and Pacific road on the route down the Red river (over which there is no projected Railroad) and to the Forts (and Indian Agencies in their vicinity) above specified. I desire as preliminary thereto, to put the steamer now building, to running regular trips during the coming winter between the present terminus of the St. Paul and Pacific road and Fort Garry, going and returning once each week.

To get this steamer to Fort Garry the first trip (the streams having to be temporarily bridged, water tanks erected and wood stations opened), will cost about ~~\$~~5000. To make permanent bridges and put the road in good condition for summer work on the main line and the branches will cost about \$15,000. To construct and deliver eight 10 ton steamers with necessary burden cars for work, next summer, will cost about ~~\$~~55,000.

It is necessary to put this steamer to work the coming winter, to give confidence to the public in the practicability of transporting freight and passengers in all seasons, by steam power, over the prairies of the North-west previous to the opening of the business season next spring; to give evidence to congress that steam is feasible for the transportation of mails and passengers from Minnesota to Montana; to satisfy the Territorial legislature of Dakota that Yankton may in a few months be connected by steam with the settlements at St. Joseph's and Pembina ^{on} her northern frontier; to demonstrate to the legislature of Minnesota that the commerce of the state may be increased as well as be facilitated by

steam wagon roadsto connect with raildroad lines on the prairiesof the state; and to induce the authorities in the Territory formerly held by the Hudson's Bay Company, to take such interest in the opening of a steam wagon road to,if not across the Rocky Mountains,as will secure from the Canadian parliament assistance in land,if not in money,to enable us in a short time to operate between Fort Garry and the headrof the Saskatchewan river,if not to the navigable waters of the Frazer river.

To effectan^a organization that will give tone and character to the enterprise,I propose to form a company under the statutes of New York to be styled the "International Steam Transportation Company".

Said company to be composed of J.R.Brown, J.A. Reed ,G. B.Field, F. C. Candee and such other persons as maysubscribe for 500 shares of the capital stock,which shall consist of 5000 shares of \$ 100 each.Said J.R. Brown shall own 1000 shares,in consideration of his expenditures already made, in perfecting a steam power adapted to use on a common road .

J. A. Reed and G.B. Field 100 shares each for the use of patents in the construction of steamers , which are vested in them, and F.C.Candee, 50 shares, for services rendered in connection with the steamers.

All said shares to be deemed full paid and subject to no future assessments whatever. The 500 shares to be subscribed, to be subject to assessments to the amount of 75 per cent on the face of each share , 10 per cent of which shall be paid as soon as the steamer now building shallbe completed, and a satisfactory test of its capacity to haul 5 tons at a speed of $4\frac{1}{2}$ miles per hour shall have been made , said funds to be expended in getting the steamerto the terminus at the time of the St. Paul and Pacific road, and making the first trip thence to Fort Garry and back. The remainder of the assessments on said 500 shares shall be made at such times and in such sums as the Board of Directors of the

the company may direct , it being intended that all other expenditures to put the road in thorough condition for work next summer , shall be met with funds arising from the sale of shares in said company in Minnesota and in the Hudson's Bay company's Territory , as it is important to have business men interested pecuniarily in the success of the enterprise, The Board of Directors shall consist of five shareholders of the company , who, in connection with a treasurer, and a Secretary of said company shall be elected by the share holder; each share being entitled to one vote . Said Directors shall elect one of their number to be President of said company, who shall preside at the meetings of the Board and perform such other duties as the board may prescribe. The Board of Directors shall adopt such rules, regulations, and By-Laws as may be deemed necessary for the proper administration of the affairs of the company, and generally control the operations of the company. *shall prescribe the number, duties & compensations of all officers & employees of the company*

Three members of the Board shall constitute a quorum, and all motions shall be decided by a majority of the members present , the president voting only when there is a tie. The meetings of the Board shall be at stated times prescribed by the By -laws, which times of meeting shall not be changed at any meeting of the Board at which any member of thereof shall be absent. The first meeting of the share- holders may be held and a full organization of the company be perfected at any time agreed upon by the said share-holders, and the first Board of Directors, the treasurer, and the Secretary, shall hold their respective positions until the 31st of Dec, 1870, and until their successors shall be elected and qualified, If (and I have no doubt of the fact, owing to the tests heretofore made) freight can be hauled as speedily and economically as I believe it can, there is no investment open to -day that possesses the

advantages for aspeedy and ample return of the of the original outlay that is possessed by this enterprize. The adaptation of the country to the use of steam as a traction motor, the amount of business now awaiting facilities for more rapid transportation, the increase of business that must follow a more speedy transit of supplies to the British possessions, and the probability of reaching the waters of the Pacific by the shortest ~~route~~ and most feasible route known, all combine to give this enterprise a prominence which none other can possess.

By a close calculation I find that wooden rails that will last many years can be laid to suit the character of steamer now being built, at a comparatively trivial expense, and with great rapidity, and I have no doubt that Legislative assistance can be obtained, to enable the company in connection with the sale of shares herein before provided for, to lay a line of wooden rails from the Bois des Sioux river, through the British possessions, to the Frazer river, on which can be hauled 40 tons of freight, at a speed of 200 miles in 24 hours. But to return to ^{the} business contemplated to be done on a common road, commencing next Spring there will be, estimating from the business of the past two years, transportation to

Fort Garry (Hudson's Bay Co's supplies) distance 300 miles — 500 tons.

" " (Individual traders, do. x) do. do. 100 "

To Pembina (do. do. x) do. do. 240 do 30 tons.

do St. Joseph's (do. do. do.) do. 280 do 50 do.

" Red River Reservation (Indian Supplies) do 200 do. 200 do. 50 "

"Fort Totten (Devils Lake) Supplies for troops" 170 do. 170 do. 500 "

" do. do. (do.) do. Indian's do. do. do. 150 "

" do, Ransom do. troops do 100 do. 350 "

" do do. do. traders & Indians 100 do 25 "

To Fort Wadsworth	supplies to troops	distance 100 miles	450 tons.
" " "	" traders&-Indians	" "	20 "
" " Ripley	" troops	distance 60 "	350 "
" " "	" traders& Indians	" " "	50 "
" Sioux Agency	" for Indians	" 80 "	150 "
" Fort Abercrombie	" " troops	" 20 "	450 "

Probable total freight to be transported 3225 tons.

This business has been heretofore done by ox teams on following terms viz. TO transport 10 tons 100 miles, require 10 yoke of oxen at \$140 \$1400 10 wagons (lumber) at 90 \$ 900 \$ 2300

4 teamsters & 1 cook at \$ 25 & 1 wagon-master at \$ 40 per month \$ 15 per month. Provisions for 6 men costing \$ 15 each per month, \$ 90.

" Being for 12 days (time required for trip) \$ 100 or \$ 255 per month. Transporting 10 tons 100 miles at \$ 30 per ton \$ 300.

Leaving a net profit for trip of 12 days \$ 200 requiring 11 1/2 trips (138 days) to pay for the original outlay. Now to contrast the above work with the use of Motors for the same period —

The original outlay for steamer and burden cars \$ 7000.

(What follows, found on a separated sheet may not be the continuation of the foregoing.)

2 engineers & 2 supts. Transportation ea. \$ 50 \$ 200 per month.

2 steersmen ea. \$ 40 & 6 laborers & firemen at \$ 25 \$ 230 " "

Provision for 10 men 1 mo. at 15 ea. \$ 150 " :

Fuel & oil (say \$ 10 per day) for 1 mo. \$ 300 " "

Expense for 12 days work \$ 352 or \$ 880 " "

Transporting in 12 days 60 tons (2 days for trip) at \$ 30 1800

EXcess of receipts over expenses 4448 or \$ 337 per month of 26 working da

~~how~~

days .being at the rate of \$ 18,822² for the six months in which most of the transportation has to be done . Eight steamers at the same time (if supplied with transportation) \$ 150,576_ But as the amount of transportation to be done will not yield that sum and no account has been taken of the steamers to be employed in the transportation of mails and passengersⁿ, it is unwise to estimate the net earnings of the 8 steamers at more than \$ 75000 up to the 1st. of Nov. 1870 and \$150,000 from that time until the 1st of June following , as there would probably be but few steamers required during the winter season. I might mention, en passant, that two contracts for carrying the mail from Minnesota to Montana, both of which failed ,owing to the expense attending the stocking and running so long a line with 4 horse post-coaches as required by the last contract. The country is feasible for steam Motors and I think a contract for that route could be obtained at from 100.000 to 150.000 dollars. This is uncertain , but the transportation mentioned is a certainty and I most firmly believe the estimate of the net earnings of 8 steamers (\$ 90.000) in the 12 months following the 1st, of June next is far below what would actually be shown at the expiration of that time

J. R. Brown.

Minnesota Trader and Soldier Designed "Grand Daddy" of Modern Auto Tractors

Major Brown's Steam Wagon Hauled Loads in This State in 1860.

(By Associated Press.)

Pierre, S. D., April 16.—To Maj. Joseph Renshaw Brown, for many years a soldier and trader in what is now South Dakota, is given the credit of designing and placing in operation the "grand daddy" of the modern auto truck or tractor. This machine he developed in 1859 and 1860 and gave it the name of steam wagon.

"This machine was really the first automobile," said Henry Poehler, a business associate of Major Brown and a member of the Minnesota Legislature for several terms, in speaking of it many years later at the dedication of a monument in honor of its builder, at Henderson, Minnesota. "His idea was right as time has proven."

The story of Major Brown's life and of his efforts in developing his steam wagon have been gathered by the State Historical society and is being prepared for the next volume of the South Dakota Historical Collections by J. B. Irvine.

Came to Minnesota in 1819.

From this material, gathered together from many sources, it is learned that Major Brown went to Minnesota in 1819 as a drummer boy in the regular troops that established Fort Snelling. After attaining the rank of a first sergeant, he was discharged from the army in 1825 and became a clerk for an Indian trader. In 1830 he entered the Indian trade on his own account under the auspices of the American Fur company, whose chief factor in Minnesota was Henry H. Sibley, first governor of that state.

Major Brown was a prominent citizen in the early days of Minnesota. He was born in Hartford county, Maryland, Jan. 5, 1805.

As a member of the Wisconsin Legislature, 1840 to 1842, he urged the organization of Minnesota territory and advised the present spelling of Minnesota. He laid out the first townsite in Minnesota, at Stillwater, and built the first frame house there. He laid out the wagon road from Fort Snelling to Lac qui Parle.

Brown County Named in Honor.

The county of Brown and the town of Brown's Valley were named in his honor. He was editor and owner of the Minnesota Daily from 1852 to 1854, the paper which is now the Pioneer Press, St. Paul. He was a member of the Democratic wing of the constitutional convention in Minnesota in 1857. He built the first house in Hastings.

Early in 1845, Major Brown established an Indian trading post in what is now South Dakota, at the foot of the eastern slope of the Coteau des Prairies 10 miles west of the present town of Sisseton in Roberts county. Early in 1846 he built a trading post at Buffalo Lake, now the southeastern corner of Marshall county, near the present town of Eden.

About 1859 Major Brown was living at Henderson, Minn., and was engaged among other things, in freighting from St. Paul to Fort Ridgely and the Indian agencies along the Minnesota river.

Devised Steam Wagon.

Seeing the need of a better and faster means of transportation, he devised a steam wagon, which he had built in Jersey City, N. J., late in 1859 and which was sent to Henderson by steamboat, arriving there in 1860. It was assembled there on Main street by Charles E. Sloat and Beers Johnstone and was used for a time in running about town, in hauling freight from the steamboat landing, about a mile away to the stores uptown and for many other purposes.

It was found that it was not geared low enough to negotiate Fort Hill, a steep hill near Henderson, so several changes were made before its ascent was accomplished. These changes improved the machine in many ways.

At the dedication of the monument in memory of Major Brown at Henderson, Henry Poehler recalled that "in 1860 we celebrated the Fourth of July by running this steam wagon up and down Main street, when it worked all right. The conditions of the roads at that

Minn., in honor of Maj. Joseph R. Brown, believed to have made the first automobile.

time were against the practical use of the steam wagon. The sloughs were not graded and the creeks were not bridged, but even under these adverse circumstances the steam wagon worked admirably."

Start on 40-Mile Trip.

In the fall of 1860 a freight wagon was attached to the engine and the 40-mile trip to Fort Ridgely started. Many obstacles arose during this journey. There had been a great deal of rain that fall, the roads were soft so that the trailing freight wagon frequently became stuck in the mud. At times, Mr. Johnstone, the driver, would be compelled to cut and split timber and build a sort of corduroy road across the marshes in order that the caravan might proceed with some degree of safety.

When Three Mile creek was reached, only a short distance from the fort, the steam wagon sunk deep in soft ground and could not be extricated. It began to snow that night and by morning the snow had drifted from one to four feet around the rig and it was found necessary to abandon the outfit for the winter.

Parts of the machinery were stolen during the next few months and later the engine and boiler were taken back to Henderson and used in a grist mill. The steam wagon was never re-assembled.

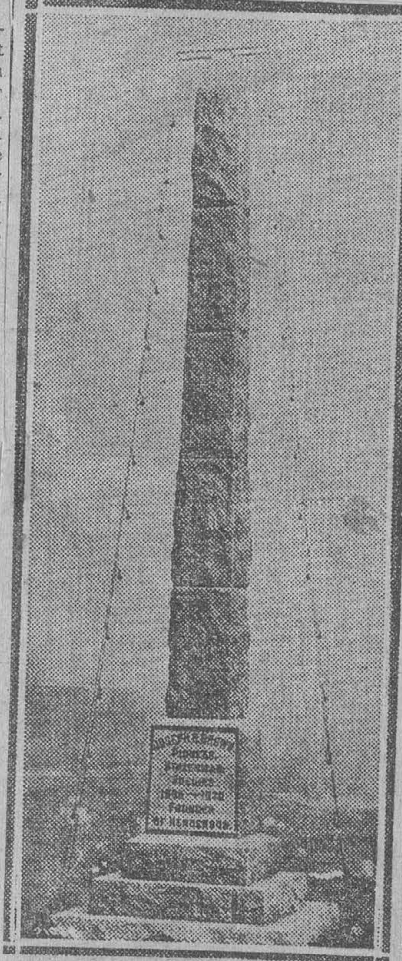
Buys New, Lighter Machine.

In 1862, Major Brown had another, but lighter and much improved machine built. The Nebraska Legislature had passed a bill allowing and authorizing the building of a road for steam wagon freighting and this second machine was shipped to Nebraska to be assembled. The tests were so satisfactory that the citizens of Otoe county, by almost unanimous vote, appropriated \$12,000 for the construction of bridges and improvement of a road through that county to the Platte river plains.

This second machine had been taken to Nebraska City at the invitation of a firm which had secured the contract for supplying the government forts at Fort Kearny and Fort Laramie with military supplies. Their object was to test the practicability of the machine for transporting these supplies.

With the improved model, Major Brown hauled a half dozen wagons with loads weighing a ton and a half each

under such a variety of road conditions that the members of the freighting company were convinced of its merits and gave him an order for six new wagons to be delivered as soon as possible. They proposed to establish a semi-weekly line between Nebraska City and Denver with these machines.



Monument erected at Henderson.

Major Starts for East.

This was in August. The major placed his order with the manufacturers in the East and himself started to superintend the construction but when he reached Chicago he heard of the Sioux Indian outbreak in Minnesota and hastened home to look after his family and his property interests. He found his buildings and store at the agency, near the junction of the Yellow Medicine and Minnesota rivers had been completely destroyed, but his family, although taken captives, had escaped death. He joined the defenders of the state with the rank of major and while commanding the white troops at the battle of Birch Coulee was painfully wounded, September 2, 1862.

Eventually the machines for the Nebraska City company were delivered, but the firm had become insolvent. Without further available means, Major Brown was unable to proceed with his work and before he had again become financially able, the locomotive had come into the country and further experimenting was abandoned.

No picture of Major Brown's first steam wagon has ever been found. From material in his possession, however, George G. Allenson, of Wheaton, Minn., a grandson of Major Brown, describes it as being a "massive affair," the drive wheels being some 12 feet in diameter.

Described in Paper.

The Henderson Weekly Democrat in either a July or August issue of 1860, the exact date of which cannot be determined, says:

"This machine is shaped very much like an old-fashioned railroad locomotive. It has but three wheels, however, two on the sides for driving and one in front for guiding. It is steered by an apparatus in front, similar to the pilot's wheel of a steamboat, only smaller, which is so geared that by turning it with the hand the wheel below is guided with perfect ease.

"The wheels at the side are two large rims of boiler iron, describing a circle about eight feet in diameter and about one and a half broad on the tread. Inside of each of these is another wheel about six feet high, with a rim one foot broad. The periphery of this inner wheel is supplied with short rims or knobs, placed at regular intervals, which work into holes out through the outer wheel or rim and give motion to it. About six inches of the middle of the periphery of this inner wheel is supplied with cogs. On top of this inner wheel, and between it and the outer rim, is a small cog wheel which fits into cogs on the inner wheel. This small cog wheel is attached to the end of the shaft, and the motion of the wheels is dependent upon it.

Smaller Rollers Hold Rim.

"The rim is held steadily by small rollers which work against the inside of it and at the sides and top. The complication is such as to give immense power to the wheels.

"The front or guiding wheel is about three feet high and is simply a broad iron wheel. The wheels of the freight wagons are simply large broad tread wheels, made of wood."

Major Brown wrote this about his first steam wagon:

"In all the various tests of this necessarily imperfect machine, the fact that steam could be profitably used for the purposes contemplated was established beyond all doubt. That steamer ascended a grade of 60 feet to the mile hauling 20 tons of cars behind it and hauled 30 tons over plowed ground. On a hard, level road its capacity to draw appeared almost unlimited. The wagon was so geared that its capacity for speed was limited to two and a half miles per hour."

Wagons were acquired by

Kappler 2;653, as medi-

and the Bois Forte treaty

700.

No. 193. 42

See in Cong. Series 1578.

See 62-52, "Neal Report" 52-

Maj. Brown Not Builder of Fort Ridgely Road

B. H. Randall of Winona Tells of How
Ancient Highway Was Brought
Into Existence by Patient Plodding
of Dull Oxen, Not by Engineer.

TO the Pioneer Press: The appropriation of money to the several counties for roads and bridges by the last legislature seems to be generally commended, and it is not doubted but the boards of county commissioners will expend it in a manner to do the most good. I see a squib in the Pioneer Press from St. Peter which says that \$3,000 is to be expended by the board of county commissioners in improving "the historic Fort Ridgely road," and continuing, says: "This road is one of the oldest in the state, and was built originally by the federal government. After the establishment of the Lower Sioux agency near Redwood Falls, and the erection of Fort Ridgely, it was found that a wagon road was needed to transport supplies from St. Paul, and in 1852 the contract for its construction was awarded. Maj. Joseph R. Brown, the famous pioneer who framed Minnesota's organic act, was the successful bidder for that portion of the highway south of Henderson, and for nearly a quarter of a century it was the route traveled by immigrants who came to settle up the territory."

"The road traversed Nicollet county for a distance of more than forty miles, and serves all but two of the fourteen townships."

How much of the above was prompted by sentiment and how much by tradition is not material. It is true the road is one of the oldest in the state. It was never built; it was made by the Red river oxen and carts, in transporting peltries, provisions and other merchandise from Pembina by way of Big Stone Lake, Lac qui Parle; the old crossing of the Chippewa river, where Montevideo now is; Beaver river, Birch Coulee, where the battle was fought in 1862; Little Rock creek, two and a half miles north of Fort Ridgely (where I have seen a hundred oxen and carts in one camp); Lone cottonwood tree in Lafayette town, Swan lake, Traverse des Sioux, and south of the Minnesota river to Mendota and St. Paul and return. It was a plainly marked road—three trails made by fifty to one hundred oxen each year, harnessed singly to a cart in single file—this was the road used in traveling and hauling from Traverse des Sioux to Fort Ridgely and Sioux agency from the time they were established in 1853 until they were abandoned.

Capt. Simpson of the engineer corps, U. S. A., was stationed at St. Paul from 1851 for three or four years and superintended the survey and construction of a military road from St. Paul to Fort Ripley and Crow Wing. There was never any military road constructed from St. Paul to Fort Ridgely by the federal government nor anybody else in 1852, nor at any other time. Neither the fort nor Sioux agency were located until 1853, and Maj. Joseph R. Brown did not build this nor any road in Nicollet county.

In 1852 he platted the village of Henderson, which was represented to be more accessible to every other place than any yet discovered, and it was the initial or terminal point for more plank road charters than any other village in the territory. Maj. Brown's effort was directed to making it a grand entrepot, and he might have succeeded if his steam wagon enterprise had not failed. As it was, some travel and freight went from Henderson through Sibley county to the fort and the agencies.

I was familiar with the old Red river trail from Traverse des Sioux to the western boundary of Nicollet county more than fifty years ago. I have traveled it with ox teams and on horseback. I have waded through the sloughs and marshes, stuck in them by mud and mosquitoes. Have camped in the groves in rain and blizzards—and I trust the people of the county may realize their highest expectations in the new Apian Way; that the county commissioners will win renown second only to the ancient road builder, Emperor Appius Claudius.

—B. H. Randall.

Winona, Minn., May 8.

Maj. Brown's Steam Wagon.

To the Editor: In your issue of Sunday, March 19, is copied a dispatch from St. Louis to the Record Herald, about Joseph R. Brown, and his steam wagon. The article contains but little history, and so much romance that I ask space to comment on it. Those who knew Maj. Brown intimately prefer to think of him as he was, and not as he is represented in the dispatch, which says: "Brevet Major General Joseph R. Brown, who, when a lieutenant, assisted Capt. Zachary Taylor, U. S. A., afterwards president of the United States, to build a military post at Fort Snelling, etc."

Comment—Facts negative much of the story and eliminate the graft. Maj. Joseph R. Brown never was a lieutenant in the army. He never assisted Capt. Zachary Taylor, to build Fort Snelling, for the reason that Capt. Zachary Taylor was not there. Joseph R. Brown was never brevet major general, nor held any other brevet rank.

The narrative further says: "Upon leaving the army in the early fifties, Gen. Brown was appointed agent for the Indians at New Ulm, Minn., and was afterwards elected a delegate from that territory to congress."

Comment—Maj. Joseph R. Brown left the army in the early twenties, and was never elected a delegate to congress from any territory. There never was an Indian agent, or agency, at New Ulm.

The dispatch says: "Gen. Brown conceived the idea of building a self propelling wagon to haul Indian supplies from the Mississippi river to the agency—and while in congress secured an appropriation for that purpose, which was skillfully concealed in a paragraph providing for school houses, churches, agricultural implements, farm wagons and live stock."

Comment—Maj. Brown was not in congress. The appropriations above mentioned were to discharge treaty obligations assumed by the government with these Indians. The disbursements of large sums of money annually, and distribution of these articles was made by Maj. Brown the agent, in accordance with treaty stipulations, and to the satisfactions of the Indian department.

The narrative says: "Maj. Brown was the author of this audacious enterprise, and the first man who ever operated a horseless vehicle in the West."

Comment—The simple horseless wagon was operated in the streets of Springfield, Ill., in the forties, refuting this statement.

Narrative—"The steam wagon was shipped to Red Wing. It made several trips across the prairie to Mankato, and New Ulm, for supplies, and was reasonably successful, but after Gen. Brown's death it was abandoned and the engine utilized at the New Ulm agency for a grist mill."

Comment—The steam wagon was not shipped to Red Wing, and did not make, nor attempt to make several, nor any trips to Mankato and New Ulm. The steam wagon was shipped to Henderson. I was present and witnessed the first start for the agency at Yellow Medicine, with one car loaded with wood, and water. After this supply was exhausted, two teams were employed to accompany the train and furnish these requisites for with one car loaded with wood and hauled from my supply at Fort Ridgely, a distance of twenty miles and less, as the train proceeded in that direction. At the end of twenty-eight days, it had made a distance of nearly fifty miles and was abandoned four miles east of Fort Ridgely, where the smoke stack furnished a target for the bullets of raiding parties of Indians during the massacre 1862. The engine was subsequently used in Maj. Brown's flouring mill at Henderson.

When Gen. H. H. Sibley was appointed to command the expedition against the Sioux in August, 1862, Maj. Joseph R. Brown served as a member of his staff. After the troops arrived at Fort Ridgely Maj. Brown was detailed to command a detachment of troops to investigate the condition of affairs at the Redwood agency and to bury the dead. On Sept. 2 they went into camp at Birch Coulee; were attacked by Indians and a fierce battle ensued, lasting two days. In this engagement Maj. Brown was severely wounded.

Maj. Brown was a pioneer of the progressive kind; was one of the earliest settlers in Minnesota, and lived here when it was a part of Michigan, Iowa and Wisconsin; was a member of the territorial council of Wisconsin; was secretary of the first territorial council of Minnesota, and a member of both houses of the legislature; was a member of the convention that framed our state constitution; was a vigorous writer, and at one time editor of the St. Paul Pioneer. He was agent of the Sioux Indians. He platted the village of Henderson. When his house near Yellow Medicine was pillaged and destroyed by Indians he moved to Brown's Valley and started that town. I was fortunate in having his friendship. I have enjoyed his comradeship, partaken of his hospitality and cherish his memory.

—B. H. Randall.
Winona, Minn., March 24.

ONLY STEAM WAGON'S CAR.

B. H. Randall Says Brown's Engine Wasn't Ditched Near Arlington.

Winona, Minn., April 9.—To the Editor: In your issue of April 3, Capt. D. L. Wellman asks me to explain some things that my former letter left obscure, owing probably more to the writer, than to the compositor.

For instance, I referred to the Semple horseless wagon, seen in Springfield, Ill., in the "forties," the type had it, "The simple horseless wagon." It was a simple thing to do. I wrote, or intended to write, that two teams accompanied the train to furnish the engine with wood and water, and hauled several cords from my supply at Fort Ridgely a distance of twenty miles or less as the train proceeded in that direction. The type made me say, "one car, loaded with wood, and hauled from my supply," etc.

What Capt. Wellman saw on his drive from Henderson to Arlington was not the steam wagon, but the car that was detached from the engine and left in a slough, while the steam wagon dragged its slow length along towards the setting sun. This car was a ponderous affair. The wheels were ten feet in diameter; the tires were twenty inches in width; the frame was of large and heavy timber and iron, twenty-four feet long and correspondingly wide; the floor, six feet from the ground. The car, once in the mire, would have required a coffer dam and derrick to extricate it. These implements, not being of the cargo, it was left to await the general resurrection.

I stated in my former letter that Maj. Joseph R. Brown did not assist Capt. Zachary Taylor to build Fort Snelling, for the reason that Capt. Zachary Taylor was not there. Col. Leavenworth was in command of the troops of the Fifth United States infantry that came in 1819 to establish Fort St. Anthony. He was relieved in 1820 by Col. Snelling, who continued in command until 1827. Joseph R. Brown was honorably discharged from the service, while Col. Snelling commanded the post.

In some cases, to my knowledge, when a military post was dismantled, the order book and all books relating to the administration of affairs have been sent to the war department at Washington. I had supposed it to be the invariable custom, and that when Fort Snelling was abandoned and the fort and reservation were sold and turned over to Franklin Steele, the books pertaining to the fort's administration were sent to the war department. Capt. Wellman's find of an order book there in 1861 would show that I was in error or an exception was made in this instance. I have seen orders that were signed by Capt. Zachary Taylor, when stationed at Fort Crawford, but the order book such as Capt. Wellman describes would be conclusive evidence that Col. Zachary Taylor, was in command at Fort Snelling, at the date the orders were issued.

—B. H. Randall.

Lakewood Cemetery Association

SAYS HE SAW STEAM WAGON.

Frazee Man Says Maj. Brown's 'Auto' Was Far From Ft. Ridgely.

Frazee, Minn., April 3.—To the Editor: In a late issue of the Pioneer Press there is an article from B. H. Randall of Winona on Maj. Brown's steam wagon to correct some alleged false history published in the Record Herald. He says:

The steam wagon was shipped to Henderson. I was present and witnessed the first start for the agency at Yellow Medicine, with one car loaded with wood, and water. After this supply was exhausted, two teams were employed to accompany the train and furnish these requisites for the expedition, and with one car loaded with wood and hauled from my supply at Fort Ridgely, a distance of twenty miles and less, as the train proceeded in that direction. At the end of twenty-eight days, it had made a distance of nearly fifty miles and was abandoned four miles east of Fort Ridgely, where the smoke stack furnished a target for the bullets of raiding parties of Indians during the massacre of 1862. The engine was subsequently used in Maj. Brown's flouring mill at Henderson. . . . When Gen. H. H. Sibley was appointed to command the expedition against the Sioux in August, 1862, Maj. Joseph R. Brown served as a member of his staff. After the troops arrived at Fort Ridgely Maj. Brown was detailed to command a detachment of troops to investigate the condition of affairs at the Redwood agency and to bury the dead. On Sept. 2 they went into camp at Birch Coulee; were attacked by Indians and a fierce battle ensued, lasting two days. In this engagement Maj. Brown was severely wounded."

"The comment" says that "Capt. Zachary Taylor was not there," but does not say that he was not there afterward as commander of the post, of which I can give some reminiscences.

During the winter of '61 and '62 the Fourth Minnesota was recruited and organized at Fort Snelling, and I was a member of it. The top floor of the new famous tower of the post was a room of good order and quite well preserved. In the room was a standing top desk or table, with hinged cover about 4 feet by 2 feet in size. In or on that desk was a book with the title of "Post Order Book." The book was bound in rough leather in real government style. It was about 8 by 15 inches in size. The book contained many pages of special and general orders concerning the post, and were signed by Zachary Taylor, commander. A number of those signatures had been cut out, and I saw an autograph fender cut one out.

I think there was the signatures of other commanders, before and after Taylor, but Taylor's signature was taken because of its "John Hancock" style. What an interesting and valuable relic that old table and book would be for the state historical society or some place in the headquarters office at Fort Snelling.

In 1859, I drove over the road from Henderson to Arlington in Sibley county, and when near Arlington saw the large form of something like a big slough, abandoned in the middle of a big slough. The Bacty brothers, who were farmers and prominent citizens of Arlington, told me that it was Maj. G. R. Brown's steam wagon or what was left of it after his attempt to haul freight with it to Fort Ridgely. As that was a great deal more than four miles east of Fort Ridgely, will Mr. Randall tell us some history that will agree with the stories of old settlers of Sibley county?

—D. L. Wellman.

OLIS, MINN.

To Lot Owners:—

The Lakewood houses located directly on cemetery grounds. lot owners, their flowers for use in lilies, violets, t season may be obtained and vases. Lot owners for use in the cemetery

A great many their lot at different will be glad to refer to the proper lot orders annual we are fill out and return order is counterma

maintains large Green-entrance inside of the for the convenience of desire to purchase cut roses, carnations, and other flowers in wreaths, hanging-baskets, use flowers of any nature y reasonable cost.

ing flowers placed on r and the Association and deliver the flowers siring to make these ch, if you will kindly attend to it until the

Lakewood Cemetery Ass'n

Arthur C. Nuesse

Supt.

Brown to Jno. A. Reed Washington D.C. April 21, 1870

Hopes put motor ahead wishes to test it while in New York within 10 days "The cursed thing through a combination of difficulties has been dragging its slow length along until it looks like an antediluvian undertaking to last until the millenium." has hopes of getting grant through, but may fail too many grants.

Reed to Brown New York Han. 25 1870;

Nothing new We have the wheels together except the three spokes which have not yet come The boiler is about half cast. The furnace pattern worked so badly it has prevented this part from advancing as fast as the wheels

Brown to H. Tanner N.D. 1869 in pencil

Present steamer will be ready to put together in four or five weeks. Built on plan of the one taken to Nebraska, with improvements in boiler and engines more power and less weight will economize wood and water. It is intended as a mail and passenger steamer and to carry express goods... to run 8 miles per hour with 2 to 3 tons of freight and 6 miles with 5 tons has cost more than expected delay in making new patterns will need \$1200 more to get it out of the shop. If cannot get money here must return to Minnesota. Legislature would have adjourned Hence applies to you.

MEMORANDUM without date of Estimate of supplies to subsist Indians (1000) July 1 1869 to May 31 1870, \$120.000; plus articles for the promotion of agriculture \$20.000. Q. was J R B still supplying Indians?

MEMORANDUM ? 1869; Plan to complete steamer with noise or parade and make sufficient tests of it in presence of competent witnesses. The to form a company. details follow.

On same sheet estimate of \$28.950 in five months carrying to Devils Lake Fort Wadsworth and Sioux Agency. Figures 30 cents below government rates last spring. 30 cts per 100 pounds per 1000 miles.

MEMORANDUM 1869

Proposes to run steamer now building from terminus of St P. and Pac. to Fort Garry the coming winter going and coming in a week to demonstrate feasibility. Will try legislatures of Minnesota and Dakota for encouragement Hopes to get Canadian parliament interested (In another place R. writes that the road to Fort Garry is as level as a barn floor.) Wants money to get steamer across the Pays des Sioux Wants no connection with railroads i.e. embarrassing connections Then about stock company

J.R.P. to ° New York NOV. 30°, 1869:

First steam wagon built in 1859 imperfect but hauled 20 tons in cars be hind up grade 60 feet to mile hauled 30 tons over plowed ground and hi through snpw a foot deep but would sink below surface in swamps and marshes because geared to run but 2 1/2 miles an hour " was laid up for the time being" and destroyed during the Indian outbreak. Is now buikding 3d wagon. In 1862 built another with improvements for use on the Platte river. Took it to Nebraska city

Citizens of Otho county voted \$12,000 to open road. " Send- ing this work I returned to New York to build three additionak steamers for... semi-weekly lone between Nebraska City and Denver. But the Indian outbreak ... compelled my return to Minnesota... before I was prepared to re resume operations(in Nebraska) the locomotive had possession of the route. Compoetion Of the St. Paul and Pacific to the Red river valley opens for steam wagon operations. The land on Red river is a hard loam and level asa barn floor Estimates 1230 tons . At \$1.25 per 100 pounds for 100 miles cost of operating steamer would be \$4800 a months; \$28,800 for six months . profit of \$26,875. Above estimate for Fort Garry and six othe points on way. Adds estimate for three other points. . Seven steamers woukd earn \$61°825 in six months. That he shoud build this third steamer indicates that he is not insane. The plan for stock company. Present steamer will be ready in 4 or 5 weeks for testa. Wants \$1200 will secure on 50 lots in Henderson.

J.A. Red to Brown New York May 13, 1863: (sic,)

20 moles of road built in Nebraska and brjdgcs done Mentions Taner of Buf falo who was here when we talked of a stalk company (sic) Taner is riting out his ideas about geting the company. Osborne has rented a house for B. in Nebraska city.

D.L. Osborne to Brown Nebraska City Feb. 21 1863

sold one of the wagons for value. The wagon here still remzins at Mortons

Brown to ?? New York Nov. 26 1869

another letter similar to those noted wants \$12000 to complet~~e~~ steam er and have tests made.

Reed to Brown New York March 24 1'63

Wants to build another machine. Hard to get capitalists to invest so far away

RESOLUTIONS of mass meeting of citizens of Otoe county Neb July 25 1862.

Statement relative to steam motive power. 4 pp foolscap Estimates . Dated in pencil "ug. 1 1862 elaborate estimates.

Notes on B. aff

3

13. Nebraska City News, July 19, 1862, The ^{was}

N. 124

Sloan to Brown Aug. 28, 1862,

Nebraska City News, Aug 30, 1862

Brown to — Oct. 18, 1862, gives

the amount as \$17,000, but in

a similar letter, Nov. 30, he says

\$12,000

cultured.

24 (a Aug) 1862

Aug. 30 - 1862

A. was used in

15. Nebraska City News, Aug. 2, 30 - The News
of Aug 30, printed Brown's letter Aug. 16

It appears from this letter that he intended
to have another motor built immediately. He

found however that one could not be delivered

in time for the coming winter but was. He

therefore planned to have Mr. Reed go with
him to make such changes as

needed to 1860 as to give it a speed of

six miles an hour, and navigate it to

Nebraska City - With the two wagons a

weekly service could be established.

In the same letter he announced that -

he had in April 1863 he would

have ready two more motors of seventy horse

power, to give a speed of two hundred miles an

hour, four hours; With two more to be

delivered October 1, 1863 a daily line of

transports would be operated.

See Reed to Brown Sept. 22, 1862 for suggestion as
to saving the lumber motor, In same letter he

the machine of the Nebraska motor was destroyed

Notes on B. aff

3

13. Nebraska City News, July 19, 1862, The ^{very} News remarks West Omaha would be well-served by the Union Pacific Railroad.

14. Scientific American July (a Aug) 1862 reprint in Nebraska City News Aug. 30 - 1862 Article possibly written by J. R. R. who was in New York at the time.

15. Nebraska City News, Aug. 2, 30 - The News of Aug 30, printed Brown's letter Aug. 16. It appears from this letter that he intended to have another motor built immediately. He found however that one could not be delivered in time for the coming winter business. He therefore planned to have Mr. Reed go with his sister and make such arrangements for a machine to 1860 as to give it a speed of six miles an hour and navigate it to Nebraska City - with two wagons and readily service could be established.

In the same letter he announced his intention that in April 1863 he would have ready two more motors of seventy horse power, to give a speed of two hundred miles in twenty-four hours; with two more to be delivered October 1, 1863 a daily line of transports would be operated.

See Reed to Brown Sept. 22, 1862 for suggestion as to saving the lumber motor. In same letter he

1
says the machinery of the Nebraska motor was destroyed

17. ~~Received~~ S. J. Brown Feb. 14, 1871
 from Papers.
 Clarence A. Parin to Folwell, Seneca Feb.

Aug 11, 1911, Folwell papers.

18. S. J. Brown to S. J. Brown, Sept. 21, 1869, from Papers

19. Glendale, Oct. 18, 1869, from Papers,
 See also J. R. Brown to S. J. Brown, Nov. 30, 1869

20. J. R. Brown to S. J. Brown, Oct. 5, 1869,

16, 1869; April 23, Aug. 21, Sept. 23

Oct. 5, 1870; Recd to Angus Brown,

Dec. 1, 1870 Recd to S. J. Brown, Dec. 27, 1870

Unknown Papers

21. Recd to S. J. Brown Jan. 11, 1871

Sutton F. Brown and others to William

Brown. July 26, 1871, Recd to Allenton

Jan. 22, 1872, from Papers.

The prairie motor left this city at 5 o'clock on Tuesday evening last, for Denver, via the Great Central Route. It ran over the two steep hills just west of town with apparent ease and comfort itself. It will not reach Denver for several weeks, as it is the intention of the proprietor to have all necessary grading, bridge-strengthening &c done on the outward trip. The road once put in order, the machine can then make its trips regularly and on time.

Nebraska City News, Saturday, July 26,
1862.

The Prairie Motor

Or Steam Wagon, a notice of the arrival of which in this city will be found in another place was built by John A. Reed, No. 63 Liberty street, New York City. It is propelled by 4 engines of 10-horse power each. The cylinders are oscillating, and connect with a shaft upon the ends of which are pinions, of twelve inches in diameter, which run upon and give motion to wheels about six feet in diameter, attached to the inner sides of the spokes the driving wheels. The drivers are ten feet in diameter, made of boiler iron and have a tread of eighteen inches. The steering wheels are six feet in diameter, and are attached at the middle of the axle to the forward end of the tank, by a ball and socket arrangement; and are guided by an apparatus similar to that of a steamboat. The tank forms the body of the wagon. The boiler is^{an}

upright tubular, standing aft of the driving shaft. Ample provision is made for carrying wood and water sufficient to run the engines for four hours. The consumption of fuel is at the rate of one cord of wood per eight hours. An engineer, fireman and pilot are required in operating the machine. From the tests that have been made in the east, the wagon has been proved capable of hauling eight tons of freight at the rate of four miles per hour with one or two tons behind it. In an experiment in ascending Bergen Hill, N.J., (which is equal to six hundred feet per mile) it moved steadily at the rate of four miles per hour without any perceptible diminution of steam.

Upon arriving at this city, steam was raised, and the wagon propelled itself from the deck of the West Wind to the levee. Coming up from the levee it had to overcome an average grade of one foot in nine, of which a distance of some thirty feet was one foot in six, or 880 feet to the mile. The engine was full of the muddy Missouri water, and the cylinders worked with great difficulty.

The next day, the engines having been cleaned, the wagon was taken over Kearney Heights, and crossed Table creek at "rock ford." Going up Kearney Hill it was necessary to run across a recently plowed garden. A drizzling rain had been falling all the morning, and the ground was so saturated that considerable difficulty was experienced in getting through the garden. The driving wheels sank in the soft earth about six inches. Once through, however, the wagon was run upon the unbroken sod, and passed smoothly a grade of about 400 feet per mile, a distance of nearly half a mile. Thence it passed out McConnell Avenue, to the north line of Mr. Wood's place, and leaving the road ran a distance of nearly

150 rods through the hazel bushes and sumac. It then descended to rock ford, turning at the bottom of the hill, an angle too sharp for an ordinary freighting team and wagon. This hill is less than half a mile in length and has a descent of about 275 feet. Crossing the ford, upon a bed of loose stones, it came up from the creek a distance of six or eight rods over a grade of 960 feet to the mile, the rain still falling, and the soil very slippery. The Sixth street hill is nearly 500 feet to the mile, and is about 700 feet long. Up this the wagon moved easily. Arriving at the top, it was run along the level road to Main street, at a speed of about five miles to the hour, and halted for the night near the Seymour House. Upon the sod, the drivers made a depression of about one inch. Had the ground been dry, we have no doubt that the wagon could and would have been run the whole distance, without stopping; and have proved its capacity for moving a load over heavy grades. Nebraska soil when freshly wet, is like so much grease; and under the circumstances, our only wonder is that the machine run at all except upon level ground.

In England these motors have been in use for some years. They are there called Traction Engines, and are made available in the dock yards and larger machine shops. For transportation purposes they have been found to answer nearly all that has been required of them. The roads are generally macadamized or planked, are wider, have fewer steep grades, and are strongly bridged. Less difficulty is therefore experienced in the construction of such machines there, than here, where the highways are new, soft, narrow, steep, and but temporarily supplied with light bridges. ON the 14th of March last, the Secretary of Bray's Traction Engine Company, read a report

of the Directors, in which, after citing the opinion of many eminent machinists and engineers, it appeared that they and the officers in the company, had "the fullest confidence in the ultimate success of the system of Steam Traction." The result of the experiments of this company, proved that the cost of transporting one ton of goods per mile could be reduced from 8d by the ordinary method, to 4d by steam traction.

The owner of the machine now under notice-Gen. J. R. Brown, of Minnesota, -the engineers and others who witnessed its operations on Tuesday last, have the fullest confidence in its success. They believe it capable of accomplishing the extreme duty which has been claimed for it-hauling ten tons of freight one hundred miles in twenty four hours.

Of the importance of the enterprise to the vast region lying between the Missouri River and the Rocky Mountains, we will speak hereafter. The present machine may not be entirely successful. If it is not, its failure will not prove the system a failure; it will instead demonstrate the problem of what is wanted to make it successful, and lead to the adoption of new appliances of the principle involved.

Nebraska City News, Sat. July 19, 1862.

Accident to the Steam Wagon.

Gen. Brown's Steam Wagon which left here last week, has, we regret to learn, met with an obstruction in the shape of an accident. About twelve miles from the city one of the cranks of the driving

shaft broke, and stopped further progress for the present. On examination, it was discovered that the breakage was caused by an original flaw, so concealed that it could not be suspected. It is peculiarly unfortunate that this accident should occur just as it did. The wagon had got over the last rise of ground, and was about to start on the long divide which runs clear through to Kearney, when it broke. The accident will cause a delay of about three weeks. General Brown left immediately for New York with the broken parts to have them replaced. Messrs. Sloate and Osborne, the engineers remain here, and will push immediately forward when the new shaft arrives. The trip over the twelve miles accomplished, proves the practicability and success of the enterprise.

Nebraska City News, Sat. Aug. 2, 1862

The Steam Wagon Enterprise,

Has been placed upon a successful foundation. The result of the experimental trips at this place has awakened a considerable degree of interest in it, at the East, The Scientific American of the 16th, has a leading article upon the experiment made here. The following epistle from Gen. Brown shows what he had done in the premises:

New York, August 16, 1862

Editor, "Nebraska City News".- Sir: The scarcity of workmen, and the abundance of Government work in the machine shops in and about this city has delayed the completion of the crank, &c of the Steam Wagon until today. It is forwarded by express, and will be in your city in about a week, when the "Wagon" can be again be put in travelling

order.

Upon investigating the prospects for getting work done here, I find that I could not get a Steam Wagon built and completed previous to the first of November, and probably not until the middle of that month. That being the case, the prospect of getting it to Nebraska City the coming winter is far from flattering, and I have therefore determined to make such alterations in the application of power &c, as to give the Wagon now in Minnesota, a speed of six miles per hour, and put her on the route between Nebraska City and Denver, by the first of November. Mr. Reed is already engaged in the construction of the wheels, tank, &c., required; and he will proceed to Minnesota, as soon as the work here can be completed, to make the requisite alterations. By this means a weekly line can be put into operation early in November (each Wagon making the round trip in two weeks) and continued during the winter.

In April next, we will have two new Wagons with the necessary cars. These new Wagons are each to have a boiler and cylinder power equal to 70-horse, so graduated as to propel the Wagon two hundred miles in 24 hours. We can then have a semi-weekly line until about the middle of July, when two other wagons of the same power are to be delivered. They will enable us to run a tri-weekly line until the other two Wagons shall be delivered, which will be about the first of October, 1863, when we will be enabled to keep up a daily line. Mr. Reed in making a contract for furnishing the Wagons has required a greater length of time than under ordinary circumstances would be necessary, owing to the scarcity of the class of workmen required, and the difficulty in procuring the kind of iron

necessary. If he can make greater progress than his contract requires, he will doubtless do so. Mr. Reed will take to Nebraska City the Steam Wagon now in Minnesota and during his visit will enquire into the practicability and feasibility of establishing a foundry Machine Shop on the Missouri. If the necessary material can be obtained and facilities for doing the work can be relied upon he will probably so arrange his business as to do most of the work in the construction of four of the Wagons contracted for at Nebraska City.

I hope the arrangement I have entered into will be satisfactory to the people of Otoe County, and that the necessary measures will be taken to ensure the early completion of a road across the county. They may rest assured that nothing I can do to secure a concentration of western business at Nebraska City, in compensation for the expenditure, will be neglected. I enclose to Mr. Sloate a copy of the agreement I have made with Mr. Reed which will be subject to the examination and consideration of the County authorities or others interested.

The success of the experiments with the Steam Wagon at Nebraska City has created quite a sensation here. All who look at the subject are satisfied that the principle has been settled as to the feasibility of using steam wagons on our western prairies and they admit that if the one I have been experimenting with, can travel four miles an hour, hauling five tons, that additional power, with the required change in its graduation will give proportional speed, which of course carries with it additional capacity for hauling freight.

I would have no difficulty in obtaining the necessary means for the speedy construction of Wagons and Cars, but I found that money, powerful as it is, could not secure the construction of two such Wagons as we required, in time to get them to Nebraska City this Fall, and I therefore broke off all negotiations on the subject, satisfied that the Steam Wagon interests are of a character that forbids their being used for the simple purposes of speculation. I leave ~~here~~ today for Minnesota, and will reach Nebraska City in about a month. I shall cross the country to Sioux City, and select a route for Mr. Reed to take the Steam Wagon to the Missouri.

Truly yours, &c,

Jas. R. Brown

From this letter it will be seen that it now becomes the people of this city and country, to stir themselves in the matter of opening the road Westward to the line of the county. F. C. Morrison Esq., has explored a route, and has ascertained that a road of suitable grades can be made for less than \$2000. We have the evidence before us that Gen. Brown means to fulfill his part of the agreement with the citizens here, and we must not be backward in ours. The line of Steam Wagons from Nebraska City to Denver is now a ~~fixed~~ fact.

Nebraska City News, Aug. 30, 1862.

We are glad to learn that there is strong probability exists that Gen. J. R. Brown's family escaped the massacre by the Indians at Upper Agency by taking down the river in a canoe. We hope it will turn out to be true.

Nebraska City News, Sept. 6, 1862

Nebraska City News, of Sept. 6, 1862 notes that Joe Brown's family escaped from the Upper Agency in canoes.

The Great Central Route-Its Advantages appreciated
The Great Steam Wagon to Run upon it.

Very much to the agreeable surprise of citizens of this place, the West Wind landed at our Levee on Monday morning last, the first locomotive which ever pressed the soil of Nebraska. It is the Prairie Motor, designed for the transportation of passengers and goods over ordinary roads.

Gen. J. R. Brown, of Minnesota the Proprietor, has an intimate acquaintance with the nature of western highways; and appreciating the advantages of a road which has no streams of any consequence to cross, selected the Central Route from Nebraska City as the one upon which to make his trial trips. The Wagon will leave here for Denver the first of next week. We have made arrangements to record the incidents and results of the trip and shall publish them as soon as received.

We have no doubt of the ultimate success of the experiment.

Nebraska City News, July 19, 1862

The Omaha Republican is welcome to the Pacific Railroad. We've got a bigger thing than that. Reed's traction Engine will build up

this part of the country long before the engineers can make the preliminary surveyys, along the muddy impossible bottom of the Platte

And Again:

The persons connected with the Prairie Motor are Gen. J.R. Brown, Proprietor; David L. Osborne, and Charles B. Slote, engineers; and James E. Laurence, Fireman, and a colored servant. The engineers are practical machinists; and are also instructed in the scientific and theoretical part of their business.- They express entire confidence in the success of the Wagon.

Nebraska City News, July 19, 1862

Steam Wagon for Western Prairies.

The following letter we find in the Scientific American. We presume the writer alludes to the Great Divide which runs between the waters of the Platte and Kansas river, beginning at this city. It was the chief route of the California immigration of 1848 to '52, and is well known as the only really practicable route over the plains.

Messrs. Editors:-

In the Scientific American of June 21, 1862 appeared an article headed "New Enterprise-Steam Wagon for the Western Prairies. In which the information is given that a great steam wagon had just been shipped from New York for the west, intended to convey freight from Omaha to Denver City, &c, &c. I have been over the ground frequently between Omaha and

Denver City and from the nature of the country and the streams, no steam wagon of the weight of this one, could ever make the trip. From Omaha to the Elkhorn River, a distance of 30 miles, the road is a passable one, but from that point to New Fort Kearney, a distance of over 200 miles, the road is confined to a low bottom, usually overflowed in the spring season, and wagons drawn by two mules or horses, with one thousand pounds of freight travel the road with greatest difficulty and many start and are compelled to leave their wagons sticking fast in the mud. But even if the road was a good one there are a number of difficult streams to cross; among them the loup fork of the Platte river, a stream 200 yards wide, with a quicksand bottom. The main Platte river is also obliged to be crossed at New Fort Kearney which is also a quicksand bottom, and near a half mile wide, without water sufficient to run a ferry-boat and many teams are drowned in the attempt to cross.

It strikes me that a Steam Wagon of twelve or fifteen tons weight would have a good time travelling this route. I think, however, that such an enterprise might be successful if started from a point on the Missouri river some 30 miles south of the Big Platte; for from that point there is an excellent ridge road leading all the way to Fort Kearney, and no streams of any size to cross. I have no interests in any towns on the Missouri River, and give these opinions unbiased.

J. W. Gilchrist,

Fairfield, Ia.

June 26, 1862

Taken from the Nebraska City News, Aug. 2, 1862

In our telegraphic dispatches will be found accounts of the uprising of the Sioux in Minnesota. The family of Hon. J. K. Brown, murdered at the Upper Agency, is supposed to be that of Gen. J. R. Brown, our friend who brought the steam wagon to this place.

Nebraska City News, Aug. 30, 1862.

The dispatch above referred to says, "He (an interpreter named Frenier) went to Hon. J. R. Brown's house at the Upper Agency and found the family numbering eighteen, all murdered.

From Scientific American.

The Steam Wagon in the Far West.

On page 394 of our last volume we noticed the departure for the west of the steam wagon built by John A. Reed, Esq. of this city, for Gen. J. R. Brown, of Minnesota. The original intention of the proprietor was to take the wagon to Omaha for the purpose of operating with it between that point and Denver City, but he subsequently changed his mind as he found superior facilities for accomplishing his objects by making Nebraska City the initial point of operation. The steam wagon was therefore landed at that place, and the papers of the city noticed its arrival and have described in flattering terms the trials which have been made with it. The Nebraska City News of the 23^d of July in noticing the departure of the Prairie M^otor for Denver on the previous Tuesday, says, "It ran over the two steep hills west of town with apparent

ease. It was drawing at the time 3 road wagons containing 5 tons of freight 2 cords of wood, and all the wagons were crowded with excited citizens." Several experiments made with this steam wagon have afforded proof that it is adapted for the purposes of carrying freight and passengers on the peculiar common roads of that country. The distance between Nebraska (City) and Denver is 605 miles, and 500 miles of the road pass over the perfectly level and dry valley of the Platte river. The road is therefore suitable for the large wheels of the wagon, which are 10 feet in diameter, and 18 inches broad. It has hauled heavy loads on a grade of 600 feet to the mile, and as there are no swamps on its route, the circumstances of the case and the nature of the country seems very favorable to its operation.

The traffic between the Missouri river, Colorado and California is very great. Hitherto, oxen and mule teams have done all the heavy freighting, which amounts to 2000 loads per annum between Nebraska City and Denver alone- only two points. There are five regular stage routes between the Missouri river and the west, all of which concentrate at Fort Kearney. From Nebraska City to Denver the charge of stage for a single passenger is \$75, and the time of travel occupies one week travelling day and night. Not to mention the great amount of overland travel between California and the Mississippi Valley, there are nearly 25000 persons now in the Colorado territory who are obliged to send all the products of their labor east, and receive in return food, clothing and other

necessaries of life. Necessarily therefore, a great trade is and always will be, carried on between the east and the west, giving employment to great caravans upon the boundless prairies west of the Missouri river. The citizens of Nebraska in view of these facts, have regarded the introduction of the steam wagon with enthusiasm as a great improvement upon the common slow and expensive system of animal teaming on the prairie roads. On the 28th of July last, they met in mass convention at Nebraska City, and gave expression of their feelings upon the subject, and requested the authorities of the county to construct a road to its western limits suitable for the steam wagon, so as to make Nebraska City the focus of the steam wagon line. They believe that such a line of steam wagons at that city, will improve its business, and increase its wealth. The commissioners of Otoe County in accordance with the wishes of the people, have, we understand, officially obligated themselves to construct a proper road for the use of steam wagons across their county, as soon as the necessary measures are perfected to insure a daily steam line between Nebraska City and Denver. For constructing such a road the cost will probably be about \$8000, and this will cover the principal part of the expense for improving the leading route from the Missouri river to the Colorado goldfields. Gen. Brown has come to New York to make arrangements for constructing his second steam wagon, and the people of Nebraska have pledged themselves to have their road completed when this new steam wagon is landed at their levee. Not many months hence the mule and the ox will have to give (way) to the steam wagon on many of the western prairies.-

Scientific American- Nebraska City

News, Aug. 30, 1862

The people voted by a majority of 429 votes to levy a special tax for the construction of a road, for steam wagon travel through the county. The Steam Wagon Enterprise will go on early in the Spring. Gen Brown, the proprietor, will be here in a few weeks. His losses (some \$3000) by the Indian difficulties in Minnesota, will delay the matter some but not end it.

Nebr. City News, Oct. 25, 1862

Notes of an interview with Samuel J. Brown July 29 1911, at the hotel Astoria in Saint Paul.

Paine, secretary of the Nebraska Historical Society may have material re J.R. Browns steam wagon.

(I had learned from a letter of J.R.B. that the first steamer was built in 1859. This one was left in the slough on Mill creek 4 miles from Fort Ridgely. The second one was built in 1862. This was taken to Nebraska city and after the injury which J.R. B. went east to remedy, was left on the farm of J. Sterling Morton. So far as S.J.B. knows it remained there till after his father's death and was disposed of by his executor. The third steamer was built in 1869-70 in New York by John E. Reed 57 Liberty st. Reed's office was there but the actual building was done at Plainfield N.J. S.J. B. does not know what became of this one after his father's death.)

S J. B. thinks it was a crank of the 1862 machine which was damaged. Maj. B. took it to Chicago, and shipped it from there to Pittsburg to be repaired or replaced. He then started to Minnesota to rescue the 1859 machine and get it out to Nebraska. At La Crosse, Wis. he got the news of the Sioux outbreak. At St. Paul he wrote Governor Ramsy offering his services and approving of Sibley's appointment. Mrs. Judge Severance remembered seeing him weeping at La Crosse.

Osborne was engineer of the Nebraska machine and may be living.

Wm. S. King proposed to the Brown heirs that they pay what was due for building the 1862 steamer and bring it to Minnesota; he would then exhibit it at his fair, of 1872 (?)

The 1862 steamer was ready for testing in November 1870. Mr. Reed went to Maj. Brown's hotel to notify him. His door was locked. When it was broken open the Major lay in his bed dead. The bed clothing was not rumpled. November 9 1870. Funeral at Henderson Nov. 12. '70.

Mr. Riggs and Maj. Brown did not hitch. The Maj. did not approve of Bp. Whipple's management in all regards. At a meal at the Merchant's hotel the Bp. Complained of the denunciations against him after all the labor and pains he had taken to serve the Indians. Yes, said Major Brown, even I suffer in that way.

Clark W. Thompson was superintendent of Indian affairs. "Ben Thompson was agent for the Sioux. C.W. T. did things not nice.

The treaty of (1867 ?) with the Upper sioux provided that Indians should be paid for labor and produce. Bp. W. and Dr. Daniels (J.W.D.) opposed, but Maj. B. got the department of the Interior to authorize the payment of some \$10,000 of certificates issued by Ben. Thompson. The Browns bet those certificates in large amount at 50 cents on the dollar and arranged to have the Indians spend the money at their trading house at Fort Wadsworth. (partly my understanding)

In 1868 Maj. Brown advanced \$20,000 worth of supplies to relieve suffering Sissetons at Devil's lake. Govt paid him. Dr. Daniels had personal charge of the disbursement of the \$60,000 placed in Bp. W.s hands. M.N. Adams succeeded Dr. Daniels as Sisseton agent.

There was very bad reporting at the Sioux claims trial. Two Stars was sincere in his testimony.

The Brown family and the Renvilles had placed scrip on a strip of land from Granite falls down to Patterson's rapids. After the outbreak Maj. Brown needing money lifted his scrip and sold it for about \$2.50 per acre. He sold "all of ours." Later S.J.B. said it was sold to Wells and others and was taken to California by W.S. Chapman. S.J.B. went to San Francisco to see Chapman about scrip matters (I did not understand that he got much satisfaction.)

S.J.B. has no fault to find with the decision of the court of claims. It was warranted by the testimony. He S.J.B. knew that many of the upper Sioux were actively engaged in the outbreak.

Two Stars and Gabriel Renville advised the Indians before the battle of Wood lake to fight by day because they were friends of the whites. They advised a fair open fight rather than an ambush. One third of the Upper Indians, that is 1/3 of 4525 (last count,) were engaged in the outbreak. See article in Hist. Sec. by S.J.B. on Two Stars and Little Crow.

Red Iron was a man of good sense, no orator. was very superstitious. He told how when he and his wife were coming down the Minnesota in a canoe they saw a fight between a whale and the lightning. Whale ran into the bank at the Double Elbow above Henderson.

Hazetonwin had a daughter who became the wife of Little Crow's chief warrior. After the outbreak Hazetonwin sold the woman to one MacKay for a sack of flour. He adopted her by the name Augusta. He died and she got his fortune. She went to Winnipeg and married the chief of Police Baker. He was drowned by the capsizing of a boat, and she got his money. She afterwards came to Minneapolis. S.J.B. has not been able to find her. Hazetonwin had a quarter section of land which this woman might claim. She was very good looking and passed for a French girl. She resented the sale by her mother.

Eastman (Many Lightnings,) was one of the party of Sioux prisoners brought down from Pembina to Abercrombie in the winter of 1864. I suspect this is an error. *no*

S.J. B. got a 40 of Sioux scrip from H.T. Welles and located it in Salt Lake city. Turned it back to Welles.

Gabriel Renville sold his scrip to Welles for \$1.25 per acre.

S.J. B. knew all the Sioux scrippees. He got some profit from clearing up titles from those who had not followed the law. Mr. Shillock was in that business. E.G. Antoine Frenier was killed in 1864.

Some one had powers of attorney to locate scrip in his name dated in 1867. That had to be cleared up.

Brown's valley is growing when other towns thereabout do not. There are about 1900 Indians on the Sisseton reserve at Fort Wadsworth. One-third are mixed bloods. They are mostly farmers and about as good Christians as ordinary white men. They copy the white man's vices. The young men dissipate. Most speak English.

See SR 49.1 No. 413, April 6 1886 on H.F.1273 to grant a pension to S.J.B. on the ground that altho not enlisted he was in the military service of the U.S.

"Civilization bad for Indians." etc

Steam Prairie Wagon of J.R. Brown

< Sci. Am., June 21, 1862 (p 394, vol 6 new Ser) +

On the 7th inst, (June 7 1862) Gen. J. R. Brown procured a peculiar Steam Wagon to the work.

Build by John A. Root 63 Liberty St - for both from Omaha to Denver.

4 Engines of 10 H.P. ea. - Driving wheels 10' in diameter, with tread 18" wide

Steering wheels 6 in diam. x 12" tread.

Can carry wood water for 4 hours.

Two men can haul stones 4 m per hour, or one a two tons per hour.

Ascended Benet's (600' per m) 4 m per hour.

Needs 1 cord of wood per 8 hours.

Engines, boiler, & steersman needed.

Boiler & others, but of engine - but can haul 10 tons 80 to 100 m in 24 hrs. over common road.

Entirely of great importance,

* There was a later article in Sci Am. Nov. 1862
N.Y. City News Aug. 30, 1862

The Chicago Record-Herald of March 17 1906, published an article by William E. Curtis dated St. Louis, March 14 pretending to give an account of J.R. Brown's Steam Wagon. It was full of errors.

On March 24 1906, Major B.H. Randall of Winona wrote a letter to the paper which was printed in a later issue. I make the following extract from Maj. Randall:

" The steam wagon was not shipped to Redwing , and did not make nor attempt to make any trips to Mankato or New Ulm . The steam wagon was shipped to Henderson. I was present and witnessed the first start for the agency at Yellow Medecine, with one car loaded with wood and water. After this supply was exhausted, two teams were employed to accompany the train with these requisites. (there is an evident hiatus here; the narrative goes on,) for with one car loaded with wood, and hauled from my supply at Fort Ridgely, a distance of twenty miles or less, as the train proceeded in that direction. At the end of twenty-eight days it had made a distance of nearly fifty miles, and was abandoned four miles east of Fort Ridgely, where the smoke stack furnished a target for the bullets of raiding parties of Indians during the massacre of 1862. The engine was subsequently used in Maj. Brown's fouring mill at Henderson.

57 Liberty St.

New York Jan. 11, 1871

Saml J. Brown Esq.

St. Paul, Minn.

Dear Sir

Your favor of the 3rd is received and contents noted, I have just obtained letters of administration, and your Fathers' trunks, I will forward them with contents as soon as a compliance with my duties will permit, which is to ascertain what claims I have to satisfy, by a careful examination of such papers as will show what liabilities there may be, at present unknown to me, I have examined a few papers today, and see nothing that will be of service to me in settling your Father's affairs here, but I have noticed some that you mentioned as being important to you, and will therefore endeavor to forward them to you at the earliest possible moment.

In reference to the wagon, you have the right view, it should be placed on the route designed by your father, and it appears to me the parties you mention are the very ones to engage with you in the enterprise, for they can appreciate the advantages of such a machine as none can who have never been over the route and know nothing of the amount of business to be done upon it. I am aware that there are machines being built for the same purpose for which this machine was designed, I feel a confident that the ^{Prairies} ~~Prairies~~ will be traversed by the engines without rail, as much as they are with. To me it seems that those who have before their eyes the evidences produced by what your father has done in this great field are not only willingly but willfully ignorant, and like "The wise
fool

fool, who when asked to look through a telescope, to be convinced that Jupiter had seven moons, refused to do so to avoid acknowledging the fact," I see by the scientific papers there are over one hundred traction engines building at the present time, of the English Patents and yet they have never developed more than 50 % of the power, for moving freight, which was developed by the first machine which your father had built this machine moved as great a burden in soft ploughed ground as the English machine moved on macadamised road where less than half the power is required. In relation to putting the machine in operation in Minnesota I have to say that my business is of such a matter as will not admit of my absence to attend a matter of this kind, personally, therefore I can only say that I will finish and thoroughly test the machine here, and after proving its capacity, send the man, who put it together, with it to any point, you may designate, or your legal adviser, subject to reasonable charges to be paid by the parties in whose interest and by whose orders such work shall be performed. My interest in the operation of the machine must be limited by the value of the mechanical arrangements composing the machine and secured for patents for these. I am willing to receive pay from the earnings of the machine, which is the best I can do at present.

I have already given you about the cost of finishing the machine, which was two hundred dollars, it will probably cost to test the machine and ship it from \$50 to \$75, it will weigh from 7 to 8 tons. The cost of transportation to your state, ~~you state~~ you can approximate. It will not be necessary to take the machine apart, it can be shipped as the last one was on a platform car. It will therefore be but little expense to put it in operation on its arrival, I shall take pleasure

--3--

and spare no pains in proving the practicability of this all important object, which so long been the chief desire of your Father and in which I have more than once sacrificed my business, health, and reputation.

Hoping to soon learn of your success in an arrangement with the parties from Canada and I will aid you in the same.

I remain

With kind regards,

Very truly yours

John A Reed,

Per Hans.

Jno. A. Reed,

Jan. 11, 1871.

These letters are to me. They were written about the time I was negotiation with the late Col. W. S. King of Mpls, who proposed to test the steam wagon by running it between the Fairgrounds and Mpls and Minnehaha Falls. It was found however, that the steam wagon was such an elephant that the undertaking was finally given up.

S. J. Brown.

Nebraska City, Feb. 14, 1871

Dear Sir:

The steam wagon belonging to the late J. R. Brown still stands here upon my farm, where he left it in 1861 or 2.

Never have been offered more than two hundred dollars for it and therefore never sold it.

It is badly eaten by the rust and is worth nothing except for old iron.

Whether it can be disposed of at all ,or not, during these hard times I am unable to state. But I will do as you, an administrator, may direct me to in this matter,

I am Sir,

Very truly yours,

Sterling Morton,

To

S. J. Brown, Esq.

St. Paul, Minn.

THE DAILY NEWS

THE PEOPLE'S PAPER, OWNED AND
OPERATED BY NEWSPAPER MEN FOR
LEGITIMATE NEWSPAPER PURPOSES

JOHN BURGESS

W. A. FRISBIE

MEMBER OF THE UNITED PRESS AND NEWSPAPER
ENTERPRISE ASSOCIATIONS

New bunch

EDITORIAL DEPARTMENT

MINNEAPOLIS, Jan. 20, 1915.

Dr. W. W. Folwell,

1020 5th St. S. E.

Minneapolis, Minn.

My dear Dr:

Thanks to your co-operation, I was able to get word to General Brown's son, and have today received from him a most illuminating assortment of old documents, bearing upon the history of the pioneer steam wagon.

In his letter of transmission Mr. Brown's says that he sent to you several years ago some sort of a drawing of the vehicle, and he believes that it is now, either in your possession, or in the rooms of the historical society. If you can advise me where it is, it would form a most interesting, and convincing feature for the article which we are preparing.

It may interest you to know that Mr. Brown's letters prove conclusively that the Brown wagon was really the first practical American automobile, and we expect to give a great deal of prominence to the fact in connection with our article which will appear about the time of the automobile show.

Yours truly,

W. A. Frisbie
Editor Daily News.

WAFAEG.

From Letter of J.R. Brown, re steam wagon.

New York, Nov.30 1869:

Addressee not named.

Sir:

" The first (steam wagon,) I built in 1859 as an experiment to satisfy myself as to the practicability of using steam as a motive power on common roads..... established beyond all doubt. Ascended a grade of 60 feet to the mile hauling 20 tons hauled 30 tons over plowed ground on hard road capacity appeared almost unlimited but it would sink into soft ground speed limited to 2 1/2 miles per hour was laid up for the time being was destroyed with all his other property in the outbreak of 1862

Convinced of the practicability I built in 1862 another steamer with improvements suggested by experience, to operate along the Platte river on the level plains This steamer after being satisfactorily tested I took (the remainder of the letter I do not find among the papers lent me By Samuel J. Brown, 1910.

This second steamer was taken to Nebraska and put on the road. After running a few miles some part of the machinery broke. Maj. B. went east to have the part replaced. Hearing of the Sioux outbreak and the probable destruction of his family he dropped the Steamer and came direct to Minnesota. Until after the Civil and Indian wars Maj.B. was employed in the public service.

In 1870 he went to New York and had a third steamer built by John A. Reed of 57 Liberty Street. It was substantially completed when the inventor suddenly died in New York in October 1870.

The Nebraska machine was stored on the farm of Hon. Sterling G. Morton. I have not learned of its ultimate fate.

July 29 1911, S.J. B. informs me that this letter and others in his possession were directed to a Mr. Tanner of New York who was to interest capitalists in the steamer "proposition.

THE DAILY NEWS

THE PEOPLE'S PAPER, OWNED AND
OPERATED BY NEWSPAPER MEN FOR
LEGITIMATE NEWSPAPER PURPOSES

JOHN BURGESS

W. A. FRISBIE

MEMBER OF THE UNITED PRESS AND NEWSPAPER
ENTERPRISE ASSOCIATIONS

EDITORIAL DEPARTMENT

MINNEAPOLIS Feb. 1, 1915.

Dr. W. W. Folwell,

1020 Fifth St. S. E.

Minneapolis, Minn.

My dear Doctor:

Enclosed you will find copies of all the documents relating to the steam wagon which were sent to me by Samuel J. Brown, son of General Brown. You may keep these copies as we have no further use for them, and I have returned the originals to Mr. Brown.

Yours truly,

W. A. Frisbie

Editor Daily News.

WAF/AEG

New York Novy 26 1869

Sir I am building a wagon to be propelled by steam to haul freight and passengers over a common road which I pro-

pose to use in the valley of the Red River of the North from the terminus of the St Paul and Pacific Railroad to Fort Garry in Winnipeg Territory. That this enterprise may not appear chimerical I will state that this is the third steam wagon I have built in this city. The first

I took to Minnesota with all its imperfections in 1859 and in all the

various tests (and they were numerous and thorough) the fact that steam could be profitably used to move freight over a common road was established beyond all doubt: That wagon ascended a grade of 60 feet to the mile hauling 20 tons in cars behind it and hauled 30 tons over plowed ground and through snow a foot deep. On a hard level road its capacity to draw appeared almost unlimited. True that wagon was not used to any extent for the purposes of transportation because it was so geared as to be incapable of moving at a greater speed than $2\frac{1}{2}$ miles per hour and more especially because at that time the settlements (and business) in Minnesota were confined to the timbered land and the prairies near the Mississippi and Minnesota rivers where marshes were numerous over which proper roads could not be constructed save at a heavy expense.

The wagon was therefore laid up for future use, but shared in the destruction that reached most of my property in common with that of others during the Indian outbreak. In the spring of 1862 however I built another steamer with such improvements as had been suggested by the use of the first one which I took to Nebraska intending to use it on the western plains. This motor after many various ^{tests} of its power and speed at Nebraska City proved to be so complete a success that the citizens

of Otho county by almost a unanimous vote appropriated \$12000 for the construction of bridges and improvements of a road through that county which led to the level plains of the Platte river.

Pending these improvements I returned to New York to build three additional

steamers but was called home by the Indian outbreak which led to the captivity of my family and the loss of most of my available means.

Before I could again return to Nebraska the locomotive had taken possession of the route I had proposed to occupy and the enterprise was abandoned and the machinery disposed of for other purposes. Now the completion

of the St Paul and Pacific railroad to the plains of the Red river of the North which are well adapted for the use of steam Motors, being free from swamps and a perfect level for hundreds of miles, in connection with the fact that some 3000 tons of freight will pass over that road next summer for points beyond its terminus, a field is opened for the use of steam Motors on a route extending into the British possessions which must in a short time become of vital importance to our business relations in that direction, and profitable to those engaged in the enterprise. Knowing from experience the practicability of moving freight and passengers by steam power over a common road where the country is level or slightly undulating and from a close calculation convinced that it can be done profitably I came to this city about two months ago and I now have most of the machinery in a state of forwardness and the whole in process of construction so that only about 4 or 5 weeks would be necessary to the completion of the motor. According to my original estimates I had means to complete the work, but by the adoption of improvements in Boiler engines and other machinery, affording more power and less weight, while economising fuel and water, I find myself short about \$1200. to secure the completion of the work and have the

steamer properly tested previous to shipment and unless I can get that amount here I will have to abandon the work for the time being and thus be subjected to a delay ruinous to the enterprise for next year's work. It is important I should get the steamer to St Paul in time to obtain favorable Legislation for one or two routes in Minnesota which I can I think be obtained if the members can be satisfied of the practicability of using steam for moving freight. I also hope to obtain favorable legislation in Dakota, and possibly in Winnipeg Territory, or the Dominion. It is also desirable that the power of the wagon should be demonstrated previous to the lettings for the transportation of military supplies of the United States mail in Minnesota and Dakota which could not be accomplished if work should be delayed now. Although unknown to you, I have by advice of friends, presumed to seek your assistance because you are supposed to favor improvements of this kind, and because I hope that after the steamer has been tested, and proved its powers, and an examination into the business prospects of the enterprise you will be induced to take an interest in future operations. If you will assist me, I will secure the repayment of the \$ 1200, and interest in six months, by 50 uncumbered lots in the borough of Henderson, the county seat of Sibley Co. Minnesota, 60 miles from St. Paul, which property I regard as worth \$10000 in cash. Henderson being a flourishing town from which 230,000 bushels of wheat was shipped in 1867=8 I would respectfully refer you in regard to myself, to Messrs Hurxthal & Sears No. 20 Nassau St. Col Phinney .172 Forsyth ST. and Jno. A. Reed, Esqr. Machinist No. 80 (Room 50) Broadway. If you will assist me to overcome my present difficulties please inform me at your earliest convenience, and confer a lasting obligation on

Sir, Your Obt. Servant, J.R. Brown

J. R. Brown

*Probably addressed to H. Tanner of New York,
150 S. 2d St.*

Eng Newsbuck
New York, July 30, 1863.

Gen. J. R. Brown,

Dear Sir

Your favour of the 20th dated Nebraska City is received and contents noted, also a copy of *Nebraska City* News with a detailed description of the first operation of the motor on Msa. soil.

In reply to your first suggestion respecting the boiler, I would say, when I decided upon the plan and size of boiler to be used in the construction of the present machine it was not without carefully considering the difficulties which our past experience had presented, and especially the most serious one of all, namely constructing a boiler of sufficient power to draw ten tons on prairie, without exceeding the limit in weight to which we are bound, had I adopted the plan of boiler used on steam fire engines I might have increased the power 50% and still have less weight than at present, but one such test as the machine had before it left here would have used it up entirely after having worked the machine I came to the conclusion I could not have proportioned the machine better for Minn. prairie than it was with the exception of a little additional steam chamber, which was added before it left, had the boiler been made larger the whole would have to been enlarged, correspondingly this would so increase the weight as to require much larger wheels to prevent it from sinking too deep either in sand or soft prairie. I also came to the conclusion that we had the wheels about as large in diameter as was practicable, and to increase the width without increasing the diameter would be to gain but little in proportion to the extra weight of material.

In reference to the tank, the objection exist to its increase only in a compound ratio, for while it would not increase the power it would add greatly to the weight, the present tank holds 15 bbls. of water, which weighs 4500 lbs. this is sufficient to run from $5\frac{1}{2}$ to 4 hours, providing the boiler does not foam, but here I apprehend is the cause of all the annoyance you have experienced, haveing to fill the boiler with the muddy water of the Mo. R. along with the rust collect's while standing empty, the effect was much the same as a person going from N. Y. accostomed to drinking croton and on his arrival St. Louis drinking freely of the Mo. water, he would be likely to experience a slight disturbance til he became a little accustomed to the native element. I am confident that more than half of the water you used on the first trials was thrown from the boiler into the engines before it was evaporated into expansive steam, and thus it was not only wated, but obstructed the engines and haveing to be replaced asorbed the heat rapidly and diminished the power at least 50%. When the machine has run long enough to form a thin coating from the water used I think you will find it has the capacity for generating the required power and carrying as much water as is most economical in ordinary cases, I am confident that more time would be lost in carrying heavy loads of water and material than in stoping to get water where it is easy to obtain. I am now building two steam pumps of a large size for the motor designed by Mr. Jesey Frey and if it is ever completed and I can get the results of a trial I will inform you of them, when he gets on soft prairie if he does not sink deeper in the mud than we have in the mire,

then I will frankly confess that my experience amounts to just nothing at all. I think I could improve what has been done, but it would not be by adding to, but by taking from the present weight and friction. I am anxious to hear from you soon again believing you will find a great improvement in the working of the machine, I fear the boys carry too much water in the boiler to get the best results. Wishing to be remembered to all, I am as ever,

Yours truly,

John A Reed.

From Reed the noted Engineer who build all the steam wagons for my father the late Joseph R. Brown

S. J B.

Nebraska City, N. T.

Aug. 25, 1862.

Dear Sir:

Received your letter dated Aug. 14. We were getting impatient and so was the whole town.

The citizens are going right to work at the road, they have called a meeting for next Thursday, As soon as they have the meeting I will write you again. The steamer Omaha came up today, but did not bring the crank- think it will be up with the next boat.

We have put the bands on the spokes to hold them in the hubs don't think they will move much now.

Three letters came here for you since you left. I sent them in another envelope.

I read the letters you sent, to several of the leading men of the town(or city) and they were well pleased. The Sheriff said a block was picked out for the Depot and Shop, didn't know if they could get it until they had the meeting.

The landlord of the hotel would like to have some money the first of next month.

Hoping to hear from you soon, I remain,

Yours respectfully,

Charles B. Sloat,

Genl Joseph R Brown,

Minnesota

New York, Aug. 25, 1862.

Gen. J. R. Brown

Dear Sir

When I wrote you last week I little thought that you had or would soon learn that your family had been snatched from you while you was anticipating a happy meeting with them after long absence. After receiving the first intelligence of the outbreak of the Siouxs, we were anxious to learn the particulars, hoping your family had escaped. But the latest news removed all such hopes by giving the statement of your brother-in-law Mr. Antoine Frenier who had visited your house and witnessed the sad sight which he described. Were I to attempt it, I should fail to express to you the heart felt sympathy you have from all who have had the pleasure of your acquaintance here, I can only say it corresponds with our capacity to enter into the realization of the facts and perhaps none can enter so fully into your loss as my own family whose pleasure it has been to enjoy the hospitalities of your entire household, among the most pleasing associations of the past was our visit at Yellow Medicine. Mrs R. and Lotte feel to sympathize deeply with you in this sudden and severe stroke of affliction, I would not add to your care at this time but having commenced the work of which I spoke in my last for the machine near Fort Ridgely, and not knowing how these difficulties may affect your former arrangements, I would ask whether you wish me to proceed with the alternations on the machine at present. Your early reply will much oblige.

Your Sympathizing

Friend

John A Reed.

Nebraska City,

Aug. 28, 1862.

Dear Sir:

I wrote to you several days ago but since then, I have heard of the Indian troubles-thinking the letters might have been destroyed I write again.

The County Commissioners have had their meeting in regard to the Steam Wagon Road. They cannot raise money from the county immediately, but some individuals are going to advance some two thousand dollars, and go to work right away

The people suppose that the Indian troubles will effect your former purposes.

Please write or telegraph immediately.

Yours respectfully

Charles B. Sloat,

Gen Joseph R. Brown,

Minn.

New York, Sept 22, 1862.

Gen. J. P. Brown

Dear Sir:

Your favour of the 9th is received and we are glad to know that your family have escaped without having suffered even the ordinary treatment of prisoners- we see by the late news that the Indians are anxious to make peace so I trust you will soon(if you have not already) meet your family all safe- I had a letter from ^{Osborne?} Dave last week. They had the machine all ready to work again-awaiting orders-they would run out to the road in a day or two from the date of his letter, which was the 13th- they had not yet received your letter- Dave was anxious to know whether I was coming out this fall-I wrote him that the Indian troubles would delay my coming. How long I could not say-I fear the weather will be too cold to work before we can complete the alterations on the machine in Minn. if it could be run to Council Bluffs next month as it is, it would save much time and money, for the facilities for work in Minn. are less now than before the Indian trouble, would it not be well to have Charley and Dave come up and load up with wood and water etc., taking both wagons carrying plenty of beds and provisions to make the trip-by so doing I can get the machine running this fall, otherwise I fear it would be impossible. Dave says if I do not come out, he thought of joining the troops for he is tired shooting prairie chickens- if they could get the machine ready while you are delayed in Minn., and then you go with them it would be a great saving of time-let me hear from you in regard to this plan as soon as convenient as I shall be too late to accomplish any thing unless it is done soon-we might however run the machine up to the Fort, or build a house around it where it is-this however would.

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a house around it where it is-this however would be attended with great expense as well as delay-hopeing to hear from you soon I am as ever with best respects from all

Yours truly

John A Reed.

Orig. seen upon
20/17/21

New York, Nov 30, 1869.

Sir- I am now constructing the third steam wagon I have built in this city. The first I built in 1859 as an experiment to satisfy myself as to the practicability of using steam as a motive power on a common road. In all the various tasks of this necessarily imperfect machine the fact that steam could be profitably used for the purposes contemplated was established beyond all doubt. That steamer ascended a grade of sixty feet to the mile hauling 20 tons in cars behind it, and hauled 30 tons over plowed ground and through snow a foot deep. On a hard level road its capacity to draw appeared almost unlimited.

But like a loaded wagon hauled by oxen it would sink below the surface in swamps and marshes, and as at that time the settlements (and business) in Minnesota were confined to the timbered land and the prairies near the Mississippi and Minnesota rivers where swamps and marshes were numerous over which proper roads could only be constructed at a heavy expense, and as the wagon was so geared that its capacity for speed was limited to 2½ miles per hour it was laid up for the time being and subsequently shared the destruction that ~~reached~~ ~~action~~ ^{most} of my property in common with that of others, during the Indian outbreak in Minnesota.

Being thoroughly convinced of the practicability of using steam profitably for purposes of Transportation I in 1862 built another steamer with such improvements as experiments with the first one had suggested which I designed to operate on the hard level plains along the Platte River.

This steamer after being satisfactorily tested here I took to Nebraska city where the various tests were so satisfactory, that the citizens of the county, by almost an unanimous vote appropriated \$12,000- for the construction of bridges and improvement of a road through that country leading to the Platte river plains.

Pending this work I returned to New York to build three additional steamers for the purpose of establishing a semi weekly bus between Nebraska City and Denver. But the Indian outbreaks which led to the captivity of my family and the destruction of most of my available means, compelled my return to Minnesota, and the abandonment of steam wagon operations, as I then thought, temporarily. But before I was prepared to resume those operations the locomotive had taken possession of the route I had selected consequently the enterprize was abandoned, and the machinery of the steamer disposed of for other purposes.

Now the completion of the St. Paul and Pacific Railroad to the Red River Valley, in connection with the fact that a large quantity of freight will pass over that road next summer for points beyond its terminus, opens a field for steam wagon operations that cannot be surpassed in any portion of the north west.

The land, for miles on each side of the Northern Red River from the terminus of the St. Paul and Pacific road to Lake Winnepeg far into the British Possessions, is a hard loam, level as a barn floor and free from swamps. There is an abundance of fuel along the river the entire distance near which the road would pass over a clean prairie. There are a number of streams to be crossed that would require bridging- The Cheyenne is about 50 feet wider, none of the other I think exceed 30 feet. Bridging these streams, opening road yards, erecting water

tanks, and building station houses comprize the expenditures necessary to prepare the road for active use of steamers. This route also possesses the advantage of permanency as there is rail road contemplated down the Red River from the Minnesota state line into the British Possessions.

The business of the Red River Valley below the terminus of the St. Paul and Pacific road the past year was in round numbers

To Point Garry in the British Possessions, 300 miles		600 tons
" Pembina near the British Line	240 "	30 "
" St. Josephs " " " "	230 "	50 "
" Red River Indian Reservation	200 "	50 "
" Fort Abercrombie on Red River	20 "	450 "
" Georgetown " " "	50 "	<u>50</u>
Total		1280 tons.

Counting 10 tons per ^ttrip, and 100 miles per day with steamer the transportation of the above freight would consume 450 working days, equal to almost 18 months, and as the goods must be delivered between the first of May and the last of November to meet the necessities of the traders and the requirements of the government through steamers would be necessary. The above transportation at \$1.25 per 100 pounds per 100 miles (figures below ox team competition) would amount to \$55.675 and the cost of operating one steamer for one month would be

For 2 engineers and 2 steeremen each \$100	400.
6 Firemen and Laborers " 60	360.
" Fuel, Oil and other contingencies say	<u>440</u>
Making for one steamer	\$1200.

and for 3 steamers six months \$21,600 which deducted from the price of transportation, could leave \$34,075. Exclusive of mail and passenger transportation, which should yield about \$20,000 per annum.

Statement of military and other supplies transported in 1869 to points beyond the terminous of the St. Paul and Pacific Railroad, in ox teams. To Fort Garry in the British Possessions, 300 miles for Hudson Bay Co 600 tons.

To Penbina on British Line	340	"	"	Individual Traders	30	"
" St Josephs " "	280	"	"	"	50	"
" Red River Reservation	200	"	"	Government Supplies	50	"
" Fort Totten (Devil's Lake)	170	"	"	Military & Traders	650	"
" " Ransom (Cheyenne River)	100	"	"	"	375	"
" " Wadsworth (Coheandes Prairie)	100	"	"	"	470	"
" Sioux Agency near Lake Traverse)	80	"	"	Governments	150	"
" Fort Abercrombie on Red River	20	"	"	Military & Traders	450	"
" " Ripley on the Mississippi	60	"	"	"	400	"

Total transportation with ox teams at \$1.55 per 100 lbs. per 100 miles 3.225 "

The transportation with steam wagons in 1870 at \$125 per 100 lbs per 100 miles (figures below ox team competition) at 10 tons per trip would be

To Fort Garry	60	trips of 6 days each	-300	days @ \$75 per ton	47,000
" Penbina	3	"	5	"	1,740
" St. Josephs	5	"	5½	"	3,500
" Red River Reservation 5"	4	"	30	"	2500
" Devils Lake	65	"	3½	"	27,325
" Fort Ransoan	37½	"	2	"	9,375
" " Wadsworth	47	"	2	"	11,750
" Sioux Agency	15	"	2	"	3,000
" Fort Abercrombie	45	"	½	"	2,250
" " Ripley	40	"	2	"	6,000
Total			935	days to earn	\$114,430

935 working days is equal to say 37 months- expense of steamer per month
would be for 2 engineers and 2 steersmen each \$100- 400

6 laborers and firemen 60 360

Fuel, oil, and other contingencies per month 400

Making the expense of running one steamer per month \$1,160.

which for 37 months would be \$42,920, leaving net earnings \$71,510.

But as work of the transportation must be done between May 1 and Nov. 30

there would be required 7 steamers to do the work @ \$7 000- 49,000

leaving a ballance for the first six months work of \$22,510, which would
be ample to build all the bridges open-wood yards, erect water tanks and
meet all other contingencies of putting the roads in order. The above
represents the business for the first six months exclusive of mail and
passenger transportation which should net at least \$10 000 per annum.

In the winter the steamers could transport wheat etc in Minnesota on favorable
routes remote from railroad lines.

I did hope that after the steamer had developed its powers under
the tests to be made here that a few men of means would join in forming
a company with, say, 3000 shares, some 500 of which they would take and
pay 10 per cent thereon to be expended in getting the steamers to Minne-
sota, and Dakota, if not in the Dominion, and then stock could be dis-
posed of there at par to provide steamers and put the road in perfect
order for business in the spring The unappropriated stock remaining the
property of the company. Delay now would deprive me of all hope of carrying
out these plans.

Respectfully

J. R. Brown

New York, March 4, 1870.

Major Joseph Brown

St. Paul, Minn.

Dear Major:

In the lapse of time you may have forgotten me, but having been somewhat instrumental in creating the enthusiasm that has characterised you in the matter of prairie steam transportation, I deem it a duty as well as pleasure to congratulate you on your persistent and laudable efforts to name your long cherished idea successful.

Meeting Judge Nelson of St. Paul, last September, I inquired of him about you and whether you had succeeded in drawing a train of wagons by steam, as you expected you should when we became acquainted, and meeting him again yesterday, he told me you were endeavoring to obtain legislative authority and aid to construct lateral roads from the trunk lines of railways, on which to run steam drawn wagons.

Being out in Minnesota last fall, for the first time in my life I was reminded of you and your enterprise by the general level surface of the country and the ease with which railroads, or ordinary country roads could be made and traversed by steam, the only drawback being the difficulty in carrying fuel. On reflection I concluded that could be alleviated by having fuel at stations, just as it is done on railroads.

You deserve all you ask from the legislature, for there is no man in the state that has spent money more freely for its advancement than yourself, and I sincerely hope that you will be successful.

By the way Major, it would be well for you while making experiments in steam road transportation not to lose sight of the great value there would be in adapting it to the purposes of plowing, for there is nothing so important now as a speedy mode of preparing the

the soil for seed.

In every other department of agricultur l labor, machinery has been introduced by which it is greatly facilitated.

Whenever I meet our mutual friend Mr. Reed, the machinist, I inquire about you. I have not seen him for some time, but presume he is well.

I should be very glad to hear from you and to learn that you have accomplished the great object of your life- the successful hauling of a wagon train by steam over the ordinary roads of your state.

It would be a proud day for you, and would, to some extent repay you for the expense you have so liberally borne.

At all events, friend Brown, I wish you success, and assure you that if I were a member of your legislature I would vote for giving you whatever you might reasonably ask.

Again, wishing you success, and hoping to have the pleasure of hearing from you, I remain,

Very trul , and

Very Respectfully yours

Robert Taylor,

320 West 19th St.

57 Liberty Street, New York, Dec. 27/70.

Sam J. Brown Esq.

Dear Sir

Your favour of the 15th in reply to my last to your Bro. A. is received. In reply I would say I shall take great pleasure in corresponding with you and giving every assistance in my power to carry out the purpose of your Father in building the steam wagon, however, it may be looked upon by those who never have known by experience the importance of such a machine and who never believed til they read of the success of a new enterprise in all the papers throughout the country.

Gen. Sibley called on me and presented his papers authorizing him to act for you here. I went with him to the Public Administrators office, the results you will learn probably before this reaches you. I expect to apply for letters tomorrow as arranged in presence of Gen. S. and as he requested forwarded your father's trunks at the earliest possible moment and after duly notifying the Public and settling all just claims send you the ballance of money now in the bank.

I have endeavored to give (in my letters to Mr. Rice and Augus) the statement of your father's matters here as near as my knowledge of them would permit at the time. I have just received the undertakers bill which is \$110.20.

Should you conclude to have the steam wagon finished and shipped it would require an outlay of from one to two hundred dollars more to put on the tyre and wheel fenders. I feel anxious to see it complete and on the prairie where I believe it would settle all

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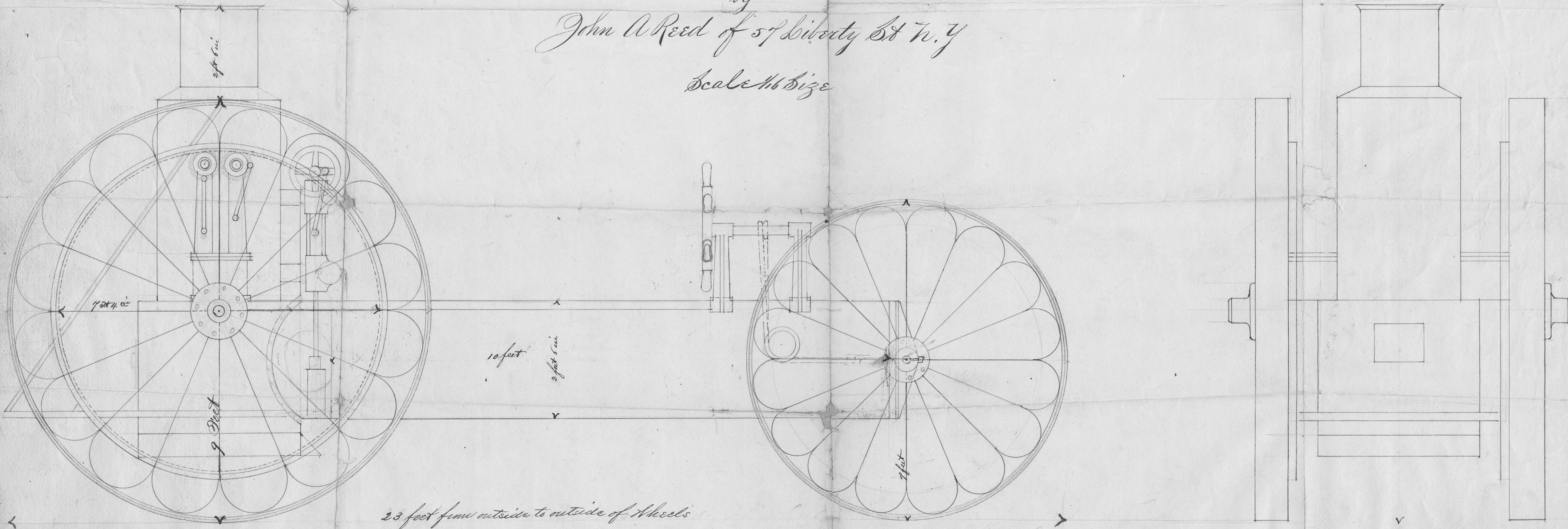
doubts as to the practibility of moving freight by steam. The principal feature in this machine is the strength of its boiler. I have worked it under a pressure of 220 lbs to the square inch and last week I set up a tested one of the same construction 230 lbs also with the water at any point from bottom to top without the slightest danger. I consider this the main leaver to the success of this ent(rprise, and hope it will be your privilege to see the realizaton of your fathers hopes.

Please remember us all to your mother and sisters in love and sympathy,

Very truly,

John A. Reed.

Steam Wagon of Six Tons
built for
Hon J. R. Brown of St Paul Minn.
by
John A. Reed of 57 Liberty St N.Y.
Scale 1/16 Size



1870

Henry Wagon