FORT VANCOUVER
MAY 7, 1878

Dear Sir:

I thank you for your kind offer. My next destination was only two of them attended by my care. Since I have been from here I have been in Tennessee. The sick was larger than from than usual. The fever has left the town but has left me very weak. When the season is a little further advanced I intend to apply for a sick leave to visit some place on the coast when I can be quiet for a few weeks. To try if the salt air will not
afford the luxurary
which

I can write this
aff post

To
Soe Howard
A.S.
Washington, May 6, 1838.

My dear General,

In our Founding Hospital we find ourselves strained for want of a working majority on the RS of Directors.

At a meeting last night it was thought best to supply the places of those Directors who had moved away, with other resident hands, but instead of declining the places vacant thought it best to ask the resignation of such as had remained. Of course you will see the propriety of this & will not conclude it carries with it any disrespect...
Much regret you remaining
on the Board but as there is
no compensation, and their having
rep it is too far for you to come
to attend the meetings.
I have written a form he
will answer the purpose.

We are in the midst of
warm weather - the sight
of Old York would do us all
good. But this we forego,
Since fate will it be!
This pleasure is yours
to enjoy tous les jours -
yours as a few


dt

MAY 22
1878

O.O.W

S.

T. Stedman
Washington, D. C., Aug. 8, 1878

Dear Son,

Have you been any thing yet for school? I was delayed several days in receiving your letter in getting information. That seemed sufficiently definite. School has a good general Classical Education and as I before explained the Calibre address and experience of a first class typewriting man, but would have to learn the specialty of topographical drawing.

My family join me in much love.

Your and forever

[Signature]

Jeff Smith
Dr. Friend

I have just mailed a very poor model of a stranger, that is, a side beam of my bridge. Be pleased to note the following ideas:

1. The horizontal part is a specimen of what I claim, namely the wire tube tension beam, apparently a very small, yet many an incomprehensible matter yet the same substance is hung in such form on the curve of a beam to a stronger one another model to strengthen the curve of hanging it from a weak form of a beam to a stronger when the enclosed wire is put into tension into a much stronger beam. When the pushing braces are added forming a strong bridge beam.

2. Objection. The pushing braces on a Mammoth scale would be impracticable. Could I have afforded it, the pushing braces might have been much stronger with much less weight. My principle applies to the bending beam as well as hanging on the tension braces at the ends. Then the pushing brace should have pushing or holding braces above tension braces below, so where two how to be braced at each side. In short the pushing braces would as skeleton braces be much stronger than in the solid condition. It might be miles in length 1/8 pushing brace.

3. Notice the contrary very small weight of the horizontal beam contrasted with its great form when combined with the braces. Then having these wire tubes when put into tension on the some tension braces below could be easily pushed across the beam of some hundred feet, without being pulled from the other side. One after another could be...
be pushed across parallel to each other. Then tension ropes could be added below until any amount of strength is obtained.

Light portable arrangements for flooring.

There is a military bridge. The enclosed wire material might be rods a few feet long to be screwed into one another so as to make it a continuous floor. Or for wire there might be cords carried on horseback. The idea is to have a bridge which soldiers can carry on their backs or on horseback with a few horses, without having to make heavy arrangements.

4th I will send (D C) in a few days also by mail such a beam as I mention at the foot of page 4th. I will send it loose so you to the trouble of putting it up, which I hope you will excuse, because this will develop the principal advantage I claim, namely, easy transportability and easy construction.

5th The plates on the model I have sent are soft iron. The wire is inferior in quality not steel. It was damaged by a former break down, coming to a person of 185 lbs standing on it in the middle, springing when the next flew off.

6th Be pleased to be cautious in testing it. Let the apex be carefully sustained exactly perpendicularly to the middle of the beam. A beam has the horizontal beam. Let the weights be hung carefully from the middle only and let the line to the middle have a wrapping of leather or coarse cloth on it as the wire is soft and might be crushed to pieces on the wire. Giving to the lines not entering into one another laid soft wood. It is a very poor model, a weight at the middle largest to have as much distributed.
Phila. May 30, 1878

My dear friend Howard

Your postcard came only to hand, in

joining us of your safe arrival at Portland; it

must have been a joyful reunion with your dear

family after the severe trials you have gone through;

Your interview with your aged mother must have

been full of affection. Few come more purely and

lasting than a good mother. Other relatives and friends

may become cold or forgetful, but a mother means

False. B continues about the same, the swellings

on her neck neither increase nor decrease in size.

She is cheerful and makes few complaints. Says the

swellings give her no pain but are somewhat more

resilient as they prevent her from moving her head as free

ly as she desires; I have to expostulate with her

in not being sufficiently careful of her health.

She is a general favorite and her society much con-
templates many invitations to entertainments from

her and dined with church affairs and so-

ciety business. Keep her in a state of excitement

proportional to her health. luckily she has a robust
Constitution, and as summer time is nearing when there will be a cessation of these calls upon her, she will no doubt improve and I trust entirely recover.

Hannah's little daughter Hannah still languishes; food does not remain on her stomach, other means are taken to keep life in her, the doctor says that she may live several weeks or may die at any moment; she has always been a frail little thing, apparently too ethereal for this world.

Edwin and Mary are in Paris. We received a letter from Mary (Edwin does not write) stating that Edwin improves very slowly, he sleeps better, enjoys his meals, does not avoid but rather courts society; these are encouraging signs as the contrary was his condition when he left this country.

We all rejoice that the suit brought against you has been decided in your favor and that your enemies who brought you pain have been so signalily defeated. May God ever protect you.

We all send love to you and family.

Truly your friend Edwin Spence
Dr. Friend

Sent by mail two days ago a specimen of the wire tubular beam with pushing braces. Will send today or tomorrow a wire beam with a tension truss below. And as soon afterwards as I can lend instead of a wire beam. You will be pleased to notice that, as I mentioned that in the case of the resisting braces, the apex should be exactly in the same perpendicular plane with the horizontal real beam. So the tension truss below should be perfectly in the same perpendicularly plane with the beam in order to correct testing of the idea.

2) Be pleased to notice again that my wire beam in all cases is the strongest possible beam, because, provides the two ends are firmly located then the iron tension fibers or wires are the much stronger than the natural fibers of the same beam, to have a more powerful action in straightening and keeping straight the beam. That is in strengthening the beam.

3) The wire beam with the tension truss has its ends firmly located without doing violence to the pier. It is specified as having the ends lying in indentures or cavities saw on the surface of the pier so that they slip to either side. And...
They are bound downwards by the ends of the tension truss so that they cannot lift up. The ends, being thus firmly located, the tension material is like a powerful rivet binding them in two ends of the beam together in a rectilinear directness approaching & the nearest of any physical or material action to a mathematical straight line. As in a great length, say of miles (as I claim my beam will be), without power there will be some bending of the rigid envelopes, that is, easily resisted & rectified by the tension truss below.

Then, as I formerly said, if steel wire can be hung 7 miles then as in a curve, then I can certainly span 6 miles to bear a considerable burden even before adding the tension truss, so the power of the tension truss action is so great & so easily applied that with that addition there is almost no limit to the burden bearing capacity. And this very long & very powerful bridge can be evidently built with very great rapidity, this rapidity of course of construction being evidently one of the elements of its great cheapness.

With regard to a defined line of action, in which, as you express it you may assist me - I want no assistance in counterance the idea that
I am a petitioner for help towards carrying into practice any hobby of mine, or helping me in any way in my self interest. Let the thing stand simply on its own basis. If you will only take an interest in it, you should have an interest vastly disproportionate to the amount of the aid afforded, because I regard you with very much respect on account of what you have done or suffered in the cause of liberty or "common salvation." I proposed terms in my last; it would now add that if for the sake of caution, you prefer only to caveat to begin with, do so.

My nephew Frank Newland is the son in law of Sharon once reputedly immensely rich now having lost greatly through Ralston. I am perfectly convinced there are more millions in pushing these ideas than in Sharon's mines. If he could once he convinces of this, no doubt he would help me for the sake of his own interest. My nephew is too sensitively proud to take a dollar from Sharon except as he would from any one else in a purely commercial way on the grid he gives idea. His brother James Newlands was in the Patent Treasury department. I made
an application for a patent some 3 years ago. My James nephew James interviewed the Examiners who declared there was nothing new in the ideas except one thing which he said was of no importance. If he meant the tubes I am certain he was very much mistaken. The tube is the germ idea which makes possible the very great results I have reasoned on, which changes the circumstances expensive cumbersome tower suspending a mine, to much cheaper & so much the more powerful. In my letter to Le Droit Wash, I mentioned that I built & tested a model 8 feet long, 10 lbs weight excluding braces which bore, an assistant that it is 2000 lbs. I was willing to call it 1500 lbs. Properly constructed it would have borne up to 2000 lbs. The braces should not have been considered much in the estimate of weight because they are self-supporting from the foot without doing violence to the idea that even the braces above or below add an ounce of weight to the hanging or the beam. Now, then, otherwise made the tubes could be very light but very strong & beam which is the initial element of the bridge. Thos. Barland
I wish to amplify for clearer illustration the idea of last sentence in preceding letter. Although, I have no doubt you it is self evident to you.

Objection. OK! The pushing braces are no novelty, so they are & where they are used, the supporters of the bridge are used. Anyone who ever saw or heard of long pushing braces. These braces presuppose an inductive elementary string beam. It is not difficult to use them in combination with a short beam. But what beam has yet been invented that this can be pushed on partly pushed partly pulled across a wide chasm.

The wire tube beam, as the only one with some tension, thus below, is the only one that can meet that condition and mitigate beam not come above 3 tons for 3 & be balanced by the same weight on the bank, or roll on rollers across.

Or suppose you undertake a 6 mile span. On the supposition that your steel span is 1 inch square cross section wire can be hung up to 7 miles. Then your 16 miles wire can bear a load of more than 8 tons. Then a curve being

above or below the one which is to form the beam with a moveable basket if with from a moveable platform if with forming from below the tubes formed I semi-hem immediately above or below the one which is to form the beam with a moveable basket if with forming from below the tubes bolted could be applied all the way. If imagination hardly reveals the idea of what reason clearly reveals namely the 6 miles span, yet it would absolutely
The rationality to insist that it could not be done easily or rapidly for a span of two miles, that would be too much enough.

There is no such gigantic power as man's hand or eye-advised man. A horizontal beam could be placed on long traces equally. A horizontal beam could be built first, then mount it as a platform or wall. The traces could be built here, in a beam because of its strength and lightness, capable of carrying other wires or bridges. Indefinite means of the burden-bearing power is manifest. It is self-evident that while the beam is lifted by the tension, the beam combination of tension combination is an admirable idea. Yet no tension truss can act without an initiative beam above strong enough to resist the tension, but as the beam can be formed of any great length, strong enough but the wire tube beam. But enough in the mean time.

But it is well to keep in view the fact that a wire arch can be hung for miles, and that the tubes conifer much more burden-bearing power than they more burden-bearing power or than they are. One beam could be then enveloped in it, and then screwed up into tension, and then screwed up 3 times as much as before. This was probably much less than the tubes that would have been if the tubes entered only one another as my plan is. Now in what other combination wood can a continuous burden-bearing power be so much as 6 feet 2 inches thick, tested what it iron 1/4 inch thick, tested what it iron 6 feet 2 inches thick, then enveloped it in 3 folds, and then screwed up into tension, and then screwed up 3 times as much as before. See.
May 7th

Dr. Friend

I hope you will excuse my writing so much to you for I do not know how else I can bring matters to the point expressed by yourself namely I would suggest a definite line of action which you can consider for my assistance. One way would be for me to construct a model of the parts of models of such a size here for them and express them to you at such a charge for cost to you which would be easily done. If you are the parts and test them. If you are not satisfied with the model as described, have sent my statement reading I have sent the 8 foot model as deciding about the 8 foot model as deciding about the 8 foot model. Then send me the thing for all sizes. Then send me an order for a beam of 20 or on 40 feet to be capable of bearing 40 feet. I will prepare it to send. But when I think on it boxed up. That it will put this on the expense. All the expense after all you have the wood needles because you have the wood needles because you have it boxed up at Portland, can have it boxed up at Portland as well as here at all the expense are the express charges. The expense of the turned blocks for 40 feet would be $200 for iron $8.00, the blacksmithing a trifle, the weight of the frame about 160 lbs of iron about 160 lbs of wood.
the power up to 30 tons. But the whole matter is so simple especially if I go over once more in a few lines the minute details that I do not see why you would not prefer superintending it yourself and thus gain a little experience in a matter which I think would be of immense importance, would also be to me after the fatigue of war, an interesting amusement.

18th May

I just make for you a model (very ill made) of a beam with a tension truss beam. It is so constructed that when a load is laid on upon it the load is carried out at the perpendicular plane and to render the top and lower tension half of the beam perfect.

In the down and across of the beam only half of the beam is used. The spanning helps the beam. 1/3 of the length is at the same time strengthened by this spanning half of the beam. It is the idea of an ordinary half way of putting two triangles together and the idea of my invention together with the idea of my shortening. Of course a person does not at the same time yield at the same time strength. If this span of the beam is the same as before and my half way of putting two triangles together and the idea of my invention together with the idea of my shortening. Of course a person does not at the same time yield at the same time strength. If this span of the beam is the same as before and my half way of putting two triangles together and the idea of my invention together with the idea of my shortening.
Part of road way of bridge. 6, 6, 6, 6, 6 are beams or sets of beams. (3 in each set). Ill sketched should be equal width. This is a space between two sets of beams to let rain pass through. 2 2 2 2 2 rods of iron binding them all. The tension ties below of see other side course can not be seen on this sketch.
The envelopes wires have been bad metal, & generally the models will be very poor specimen of the specifications intended. I am confident that if I could only afford the two dollars or so necessary for a steel wire model I could send. It would bear 500 lbs. 2 feet long.
If is a pier
1 b b b B B B b b
is a spanning beam
The part b b b alone rests on the stone
work of the pier
The part b b b b b represent a part of the beam under which there is no
masonry (that is none immediately below). The part B B rests upon a mammoth beam of iron 8' 8' which bridges across the afore-said hollow part of the pier. L L denote a powerful link encompassing the beam & then going under the Mammoth beam 6' 6' as the origin of the tension being thus held by the beam to the pier.
General O. O. Howard.
Portland, O.

My dear, dear Sir and Bro. in Christ,

The converted Jew can't but trouble you again, after a long silence with a few lines.

Will you please send me the address of Mr. Meyer, a converted Jew, of your town, to whom you once referred?

How are you. Is the Lord still precious to your soul? Thank God that the grace of our Lord Jesus Christ is enough for me!

I am teaching in the above school. I have still many trials...
May 12, 1878.

Robert St. Peck.

but I am not better than Job, Paul or my blessed Lord. I saw by the papers that some do not like you, but the Lord is your licker. General Lee and I are soldiers of a better army than that of this world. Let us trust in the Lord and do good.

Hope you are well. Best regards to you and Capt. Wilkinson (?)

Please write soon.

Yours in the great bond of God, Christ and Heaven

Prof. Robert Nathaniel Peck
Portland, Oregon
May 12th, 1878.

Dear Sir,

Pardon me for writing this. I wish to see you and I thought it best to write and ask where I may see you at what time. I want to ask you about my brother. Yours most respectfully,

Mrs. G. P. Farleman.
Cor 3rd and I. St.
Shallie, Idaho May 12, 1878  

Dear General,

I just received a letter from Captain Rainbridge of Hall, Idaho, which reads as follows:

Sir: I have the honor to enclose herewith a letter with endorsements in regard to the Springfield Rifle which was turned over to you Aug. 15, 1877, and which you failed to return to me.

If you have any explanation to make why the money value of said rifle should not be charged against you please communicate with me at once.

(Sgd) Augustus A. Rainbridge
Capt 14th Dist.

do.

I received the rifle as stated by Capt. Rainbridge and on the evening of Aug. 22nd at Camp Barn (below Henry Lake, North fork of Snake River).
I exchanged said Rifle with one of your Officers for a blanket (for convenience in riding through timber) on the 8th of Sept. nearhead of holes AM while you had command at moore the Office that I had exchanged gun with asked me for his turbine and an asking him for my gun he told me it had been sent to Ft Ellis. Mub. I refused the matter to you, you also told me that the gun had been sent to Ellis with received papers from Joseph (Mann or Brown I think) I then asked you what I had to show at Ft Hall for the gun whereupon you told some one (Lt. Fletcher I think) to give me a receipt for it which receipt I handed to Capt Rainbridge when I returned to Ft Hall New Year General if you can call the above circumstances to mind please come to my aid. The kind interest you took in my welfare while in your service makes me feel in asking you to better yourself with my affairs. It is not to save the price of a gun but I would not have anyone think I would be guilty of trying to steal a low gun. I also got a turbin of

At Fletcher when I started home that seems to be missing all I can say in reference to it is this. When I got back to Ft Hall I went among the Indians (Bannocks) and gathered up all the low guns I could (except some that they claimed as private property) and turned them over to Capt Rainbridge together with receipt from you for rifle which was satisfactory at the time, but since it appears I am two guns short. Hence my asking you to send a letter I claimed it necessary to explain matters and try and vindicate myself.

Very respectfully,

Your obedient servant.

[Signature]

PS.

I feel in claim against you for horses and articles lost while in your service "as requested by you" but have heard nothing from it yet.
Farnum, Ed. S.
May 13, 1878

94 Yale College
May 13, 1878.

Dear Amund,

Please accept a copy of my letter book "West Point."

Very truly yours,

Edward D. Farnum

Ed. S.
May 13, 1878
Dayton W. T.
May 13, 1878

Gen'l C. O. Howard
Commanding Dept. of Columbia
Portland, Oregon

Sir,

Sunday or Big Thunder a head man of the Palados came to see me day before yesterday informing me that the Humars, that 'Rines' and other leading Indians in the upper country, were contemplating an outbreak this summer; was confounded on occasioned with irresponsible Indians and white men. If this I suppose you have been aware as well as myself. Sunday was extremely desires I should communicate his words to you, at the time expecting I should visit Portland this week but am compelled to go to Lewiston and take the liberty of communicating by letter. Sunday further stated the Indians refused to hear...
anxious to remain in their present locations. "Sundax" has taken out his first paper and is a good man. He exerted himself last year in quieting the apprehensions of settlers in the Palouse country, suffering to assist them in protecting their stock and crops.

I have the honor to be
my respectfully,
Your most obedient

[Signature]

Nov. 13th, 1871

[Signature]
we are personally acquainted with him or not, as your public fame will gain any application you may deem proper to make sufficient weight. Please do not allude to the subject. I am taking time by the post out of the matter, because such things are usually anticipated.

O. W. Howard, Very Respectfully yours,

Portland 3, Hon. S. A. Simpson

Regard