

13 April 84

still → Nora

Stars & their
orbits

If your letter had been two days later I would have been gone on a trip. I am not aware I ever refused answering any question you ever asked me but the one concerning the lecture on Geography & it was out an utter impossibility at that time. I will not answer these but I will try, do the best I can. I am not posted of late on Astronomy & cannot give you much information on the sub.

Kepler was the first to discover that the E. Orbit was elliptical In the 1604 After many fruitless efforts to represent the orbit of Mars by combination of uniform circular motions (That is by by epicyclic curves) he discovered by comparing together seven positions of that planet, that its orbit is elliptical. whence he concluded that of orbits of each planet is an ellipse, with ^{the} sun placed in one of its foci. Having next ascertained the dimensions of the orbit of Mars. He found that the radius vector, or line joining the planet & the sun, described equal areas in equal time. & that the same was true of the other



D. D. Ranch.
Bear Lake Co.
Idaho Ter.

Apr. 13th 84

Miss Nora E. Crockett
Will my dear

Nora I suppose you are waiting for this letter patiently. Just recd. you this evening and was somewhat bewildered with contents. I am inclined to think that you never got my last two letters. I am going to date every letter I recd. from you and every one I write & see if there isn't something wrong I know I have written two letters since I have had and answer Must be something out of place Don't you think you are kind of ruff on me? Your letters never lie around seldom if ever one day if they do I allow tell you It is quite difficult to get mail here

I always answer as soon as I can
I am thinking you are blaming
me with all mistakes made I am
ready and willing to bear my share
You are quite sensitive to that. Don't be so
I beg you. write when you feel like it
and I will assure you I answer every one
I get. Your reasons are not founded on good
conclusions. I would be pleased to have
two long letters from you every week and
would try to answer every one of them
I have written you as long letters as you
have me. Have I not?

I am glad you had a good time
in the City and met so many old friends
There is nothing so nice in a review
than to call up the past & look at the
sunny pages and think of "What might
have been" Our Friend Charlie must
be a nice fellow. glad you think well
of him. Hope you will always be friends
I am sorry that I can't be there
would like ever so much to hear you
give an account of your trip write it if you have
time

In making the acquaintance of that
extraordinary person. (Although you
you did not say what service he rendered
you) I am glad you found him so
bright. There are plenty in this
world my superiors (No doubt you think
him to be) as I have often told you
As for good looks that has nothing
to do with the man. If he has a good
honest heart and is candid & truth full
virtuous & upright ^{temperament} he is worthy of the majority
of girls. Hope your late friend is a man of this
class. Allow me to thank him for
the favor he conferred on you

Your Friend Maggie is a
lucky girl. If she can say the same
20 years from now she is in big luck
marriages of recent date are not as congenial
as they were in earlier times. Young people
are more fickle now a days. When I
get married I want the happiest part
of my life to come afterward. I have
answered your letter as best I could & will
now answer your questions

Here is another page to fill, and I hardly know what to write. I am going to St. Charles tomorrow & will not be back for a week or two you may add your letters there & if you do not get an answer as soon as you look for one don't be get angry but take your pen & write me a long letter instead

I will answer as soon as I get them I have all of my posts made & the wire to fence as soon as the snow is gone when I have finished this job I shall leave this country for a while. I will be in Logan as soon as I can get there. I had advised you the other night & it made me uneasy. I hope you are well. I shall see you soon if all is well I have a question to ask you, if you will allow me. Between what to planets are the asteroids?

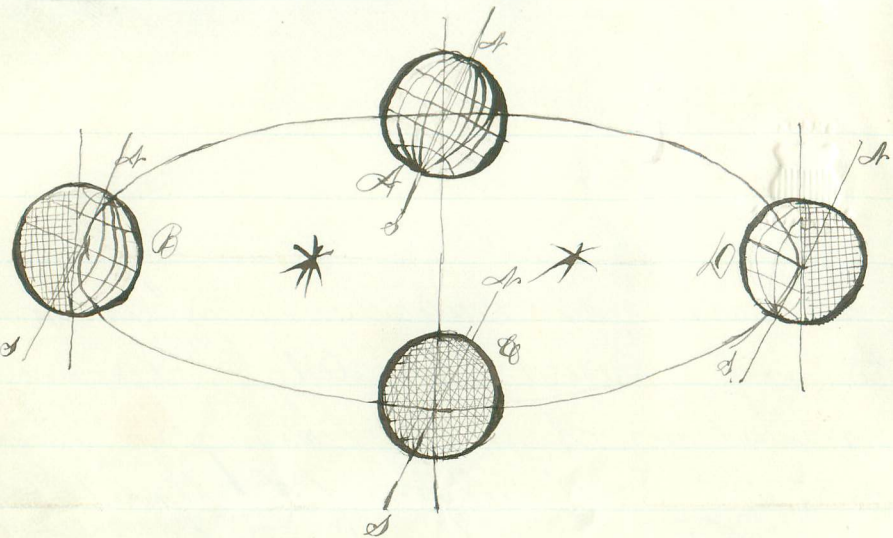
I am ever your true and unworthy friend

Wm. A. Gram.



Logan,

But why it was he never found out to my present knowledge I remember once at our formal of hearing Dr. Fellows lecturing on the ellipses of the planets but it has been so long ago I have forgotten I believe he said it was on account of the two forces veering. The centripetal ^{force} has a ^{tendency} to draw to the sun & centrifugal to draw from. and at different seasons of the year these forces vary. owing to the foci the sun is placed in. The reason why the orbit is elliptical I am not prepared to answer at present it has been over four years since I have given any attention to this study. I will draw you a cut on the next page & illustrate when the forces predominate. I feel like I had made some mistake (no doubt I have) not seeing a work of this kind for some time. If I have in your next, let me know and oblige



From A to B the centrifugal is the stronger that is from Mar. till June. then from B to C the centripetal predominates from June till Sep. Then from C to D the centrifugal predominates that is from Sep. till Dec. Then from D to A the centripetal is the stronger from Dec. to March.

This is all I will be able to give this time and could not say what it is right. If you have any different opinion I would be glad to hear it. The question or the sentence I gave you in Hyrum was. It took Noah three hundred years to die.

Well my dear I hope this will reach you in good time and you will keep a list of all the letters you get from me (the dates I have reference to) I would like very much to meet that smart good looking & intelligent acquaintance of yours. I know I should like him! What a pity you could not change his countenance! I think if you could change his heart the countenance would change. I think people's countenances are parallel with the heart & a change made in one necessarily affects a change in the other. I have found it in my experience at least. an honest heart has a serene countenance & a serene countenance has an honest heart and if ever I should surrender my claim on you, to any other man, I would want it to be a man of this kind. I would hate to then but if I had to, I would do it like a man. Time will tell, we have but to wait & see. I am in no hurry if I can win the victory be it a year or two from now.