

O Keep this.
Home?]

Vassar College.

Poughkeepsie, N.Y., Nov 10, 1868

Dear Mother,

I was so much interested in Prof Farrar's lecture this morning that I want to give you the pleasure also.

When people first used rifles they found that the space there must be in the barrel around the ball in order that it would drop in, allowed the ball to bounce about & not go in a perfect straight line so would not always hit. In the [first?] of the 17th century some one put a piece of oiled cloth around the ball to fill the space, but if it was not put around just

right it was worse than without it, for if it slipped one side the ball went still more astray They made the ball a little larger and rammed it down, but this crushed the powder to dust & so destroyed most of its power for you know how much quicker fire will go thro a pile of little chips than a pile of sawdust. & it took all a man's strength to ram it down & his hands were trembling & he could not aim as true.

In 1828 & from then for a few years 2 Frenchmen invented a "chambered" gun & this was the result of their improvements on each others ideas.

[diagram]

The little shoulders kept the ball from the powder & the air space, but it [exp..d?] with greater force - the ramrod was rimmed and to fit the foil so that it did not flatten it - so badly - but there was a protruding into the smaller chamber which made the ball bad shape - and the fire was (always had been) applied at one end men said the perfect

point of application would be at the centre of the end nearest the ball but it couldnt be done - but way back in 1835 some Prussian Officers invented the famous needle gun - kept its construction secret till this last war - The Chamber was made the largest so

[diagram]

the powder had to do the forcing. All was tied up in a bag and put in at the breech so saved the dangerous position at the mouth of a gun. it was put in with no loss of strength and quicker. 3 great advantages - When they placed a percussion cap at C- the center of the powder and had a steel needle the size of a knitting needle (at least at the

point it was as small -) drawn back to P & held by a spring till the charge was in - then letting it go it went thro powder bog and all in the cap

which it exploded, igniting the Powder & the fore run backwards as the ^gas rushed forward, so setting the whole on fire - & losing none - a piece of wood was put between the ball and cap so that the needle need not be dulled -

Thus was perfected the gun - nothing surpasses it in accuracy -

Is it plain? It seemed so to me - Millions & Billions of money have been spent on this one machine more than on all the colleges in the world -

Americans have been devoting their ingenuity to getting guns that wont bur[st?] & have done it - we were disturbed by the stroke of the bell & got no further.

I thought you & uncle Joseph would be interested in this - and will gossip a little about eatables for Aunt Emilys benefit, & perhaps she will like the picture - to keep till she gets a catalog with my name in it. - It is quite accurate - my home is back of the place I've marked I go out of the door indicated recite two lessons in the room back of the one marked on the first floor the other two where shown on the second

the front extends back a long ways for the Chapel & Dining Hall -

corridor window

head

entrance whatnot

an arch & by means of

a curtain can make a

[...f...h] room

Open configuration options

bureau bureau with glass [chair?] wardrobe

window chair chair window chair

where I am now

bed commode wardrobe bed commode

with pitcher [...]

b [...] Rome

a about 15- ft square

Study Parlor

2 gas jets

chair Table

4 dormit[.]s instead of 5 being a [...] [...]

This room is the ^back corner of the left wing as you look at it - [in?] the picture really the right wing of the building 3rd floor.