The accompanying plans are designs for the New Custom House proposed to be erected in this City; they are herewith submitted for the consideration of the Commissioners appointed to superintend the structure.

The building will be 140 feet x 75 feet, interior dimensions, to be built of some durable granite such as may be hereafter decided on. The cores partition, vaulting, etc., to be of good hard bricks. The whole edifice may be rendered fire proof by substituting iron when wood is generally used. The roof of upper story floors may be made with iron beams resting on 6 or 8 inch cement with copper. The floors of the two upper stories to have iron beams, placed between hits bricks or flagged with an iron plate which can be obtained from 5 to 12 feet in length, to make a light as well as a strong flooring. The cement, cement and brickish floors to be imitation brick vaults of a hemispherical form. The form of the arch, however, if been intended is found to require less material than two lateral thrust being less than half of an repairing form of construction. The Roman Herringbone or herringbone which was complete last season is of this construction. Likewise too free of arches for the corner ends in the Custom House, which will answer the purposes for which they were intended. The floor of the steam engine boiler rooms of the Rededica at the Navy Yard are constructed with iron beams with brick arches between stone and brick are satisfactory. This latter mode however is rather more expensive than vaulting, but does not require
a greater thickness of walls than when wood is employed for the floors, consequently is well calculated for upper rooms, where there is but little weight upon the walls.

The rooms may be made of iron. The entrance door shall be of bronze, imitated after the manner of those of the Pantheon of Rome. The doors, frames &c. may be of the finest cast iron, annealed (as in our own by instruments in cast iron work) so as to render it nearly, if not quite as strong as wrought iron. The doors may be made folding, or hung with weight lines, in the usual manner.

The whole foundation the lake or lake at the cellar, or deck as can be well avowed to the public at the port, substantial ruling, done with a new weighing not less than an ton & falling straight a third at least 20 feet.

The space round the building between the walls, new erecting or the posterior wall of the building, is left undivided (as the plan of the cellar) & the partition walls may be placed at such distant as required. Openings to be left in the pavement for getting down coal or any other article.

A furnace is placed in the centre of the cellar of sufficient capacity to heat the whole building, with boiler of foundry slaves, to continue as to heat under the pavement or floor of the several rooms, as practiced in some of the London fire offices. This method of heating buildings is equally efficient in selling in the purity of the heated air; in the beneficent ray in which it is delivered (this the floor), in safety from fire, in preserving from smoke and draughts, & in economy of fuel; it cannot fail to be generally adopted when it can be applied. If it be desired to make the apartments comfortably warm the way is, to have a body of heat issuing from the pavement of the hall, when the room does open instead of having to think from a cutting part of cold air, there will be a new sensation of warm.
Every one must be conscious of the severe cold, which can be
caught by persons who, whilst heated by a large fire, or excursion
room, have a cold draught of air thrown upon them from
the opening of the door; or who have to leave a warm room to
walk up or down stairs, when the air is cold as in the
street, more piercing from the draught.

The East and West Elevations are composed of three parts,
a central, and two wings. The central is a series of eight fluted
columns of the Doric Order, from a temple at the seats
of Athens. This is admirably adapted to the work in the granite of this neighborhood. The wings, however, take
whole elevation from a rusticated basement with solid piers, of
which stands under each column, leaving a footing for support
for between them. The columns support an entablature;
true specimen of the tympanum of which may be decorated
with some embalunatic figures, but it is left without or
namum in the drawing, for want of time to make a suitable
design. The entablature is to extend around the whole build-
ing, ornamented by a blocking course in which are shown
small windows for lighting the upper rooms, but these windows
may be disposed with if thought mightily. A plate glass or ships
deck lights substituted, if the seats be used. Ships have been in
shaggy employed in buildings lately erected at the Navy Yard.

The elevation North are composed of two columns, &c. &c.
of the same style as just described. The South Eleva-
tion is wholly in antae.
There is then upon this building a dome which may be omitted or one of a different form may be adopted. I intend these walls & shelves of the 2nd floor to be of different forms of columns & domes in order to relieve the elevation but time will not allow. Should it be desired they can be furnished but stone columns & domes are going out of use in public buildings of the present age.

The principal story is entered as shown on the plan from the four fronts. The principal entries are from East & West. The Staircases leading to the principal floor have an easy ascent, is intended the style of Moresque. The three staircases are constructed to be of Granite. The central staircase takes its lead from a gallery communicating with all parts of the principal story will require more workmanship than can be expected in Granite.

On the principal floor is the grand entrance, now to form a style of which are shown in the plan the face. It is proposed to make the columns of Italian Marble of a light dome color except the Capitals which are the white. The inscriptions & character of the words of the emblems are to be that of the Chalcic Monument of Cyprianus at Athens. The columns are of this style, decorated. The center of the 2nd story, same as the Colonn.

The ceiling to be arched with brick & handsomely finished with stucco & in colors.

Time will not allow me to go into the details of architecting the materials, work of the Edifice but should the Board of Commissioners think favorably enough of the design being presented I will immediately