

**Description and specification of the manner of executing and finishing the work of the two wing buildings proposed to be attached to the Patent-Office building, agreeable to the original design, and which are further explained by drawings made for that purpose ... Robert Mills, architect and superintendent. Washington, D. C., April 20, 1849.**

DESCRIPTION AND SPECIFICATION

Of the manner of executing and finishing the work of the two Wing Buildings proposed to be attached to the Patent Office Building, agreeably to the original design, and which are further explained by Drawings made for that purpose.

GENERAL DESCRIPTION.

Each wing building will extend from each end of the present building east and west, 70 feet, with an entire depth or length of 290 feet. The architectural order in the exterior of these buildings will be the same with that in the present building, which is the Greek Doric, composed of a series of antæ (pilasters), raised on a high basement, running the whole circuit of the exposed walls, and surmounted by their regular entablature, corresponding in its details with that of the celebrated Parthenon. For particulars, reference can be had to the *facades* of the present building. The whole height of the order, from the foot of the pilasters to the top of the cornice of the entablature, is 46 feet; the height of the base is 13 feet, the blocking over cornice 3 feet, making the total height 62 feet. The interior arrangement of these wings will be—on the east, the height into three stories above the basement, divided into large office rooms, spacious corridors, and stair-cases, all groin arched and made fire-proof in every part; the windows in each story are to correspond with those in the present building. The wing to the west, being for the special accommodation of the Patent Office, will, in the two stories above the basement, be disposed in one entire room, or divided into large halls, for the reception of models, &c., all groin arched, springing from pillars, and made fire-proof. In the upper story, a gallery will extend round the entire room, supported by columns, and the walls prepared for the reception of works of art, to be lighted from above. With both of these wings, on every floor, a communication will be opened with the present building, so as to constitute it one for the transaction of the business of the Department which shall occupy it. The basement story of the west wing, from the sudden fall of the ground or street here, will be about three feet higher in the pitch of the rooms, and the windows will be higher than those in the present building on this floor.

The facing of the exterior walls of these wings will be white marble, and the roof covered with copper, as in the present building.

## EXCAVATIONS, AND MASONRY OF FOUNDATIONS.

Dig out so much of the area of the wings as may be directed by the architect, to a depth which will be designated by him, and level off the same. Dig out for the footings and piers perfectly level at such depth as may be designated by the architect, not exceeding one foot, and before any masonry is laid, ram or pound the earth in the trenches very compact. Cart away all the earth, so excavated, not required to fill up irregularities within the square.

Construct the footings of the external walls with large stone from the Potomac quarries, having level beds, not less than 9 inches thick, and from 3 to 5 feet long—the first course or footing of said walls to be 5 feet thick, the second course 4 feet thick, and the residue of the wall, to the height of the basement story, 3 feet thick, including the thickness of the cut stone facing. Great care must be taken to bond the stones composing these walls in the strongest manner, every layer being well bedded in cement mortar, composed of stone lime, compounded with coarse and sharp river sand, in proportions of four of the latter to one of the former, in an unslacked state, or in such proportion as the architect may direct, and after the mixing of the mortar, and before using, one-fourth of the hydraulic cement (1 barrel of cement to 4 of lime) to be thoroughly mixed with the mortar: care must be taken that no more cement is mixed with the mortar than can be used within an hour or two. The joints of the stone masonry must be flushed and well bedded in mortar, and settled down with large wooden mallets.

The interior walls and piers for the arches within, must be built in the same careful manner, of the thickness and heights designated on plans. Where openings occur and piers intervene, the jambs of the same may be formed of blocks of hard free stone, and the arches of good red brick.

For the disposition of these walls and piers, see the Drawings.

## BRICKLAYER.

Construct all the walls, behind the cut-stone work above the basement, of brick, laid and well settled down in cement mortar, compounded on stone lime, and sharp river sand, with a portion of hydraulic cement as may be directed by the architect—the latter to be mixed in as the mortar is required, as noticed under the head of masonry. The thickness of these walls not to exceed, with 2 the cut-stone work, 2 feet. Construct all the partition walls 2 brick in thickness, with 1½ brick piers, in angles, to all the large rooms from which the groin arches will spring. Construct 9 inch groin and other arches, in all the rooms and passages, from the basement to the roof, according to drawings, with the best quality red brick, laid in the most workmanlike manner, with strong cement mortar, as before stated, with this difference only that a larger portion of *hydraulic* cement is to be used in its

composition. The spandrills of these arches to be filled up as the architect shall direct. Carry up at the same time the chimney breasts, fire-places, and flues, both for air and smoke required for the rooms, &c. The flues to be 1½ brick square for the smoke, and equal 9 inch square for the air flues, well targeted inside, and of equal opening for the smoke all the way up. The outer wall enclosing these smoke flues to be not less than one brick thick, well bedded in mortar, and joints filled flush. As the stacks of smoke flues rise above the roof, they are to be cased with cut stone outside. The brickwork within will therefore have to follow the setting of the courses of stone.

The well-hole of stairs in the plan will be vaulted only at the top, and under the roof with a suitable sky light opened through it as shall be directed by the architect. These specifications of the brick work are intended to apply to both wings of the building, though in the west wing it is proposed to omit the division of the space on each floor, and to spring the arches from pillars.—(see plan.) The groin archings will be thorough in the west wing.

Previous to laying the floors in the rooms, suitable provision is to be made by the bricklayer for the support of the sleepers of these floors, of which directions will be given by the architect.

#### SPECIFICATIONS OF CUT-STONE WORK.

All the exterior or exposed parts of the walls of the two wings will be faced with white marble. The basement face to be channeled as in the General Post Office piers, except within the circuit of the court where the light-colored granite will be used for facing the basement. The ashler courses throughout will average at least 9 inches on the bed; the height of these courses to correspond with the courses of stone in the present building. Good bonding must be observed in laying the ashler, both in breaking joint and introducing occasional headers, and if required by the architect, clamps of iron to be thrown in additional to bind the stone to the back wall. As the brick work will proceed simultaneously with the cut-stone work—the backing up of the marble and granite ashler and pilaster blocks must keep pace together, and thus aid in increasing the binding of the whole in mass. For the details of finish of this cut-stone work, reference must be had to the same kind of work executed in the existing building to which the wings proposed are to be attached and form a part, and to the drawings referred to in these specifications.

Prepare and construct a double flight of marble steps to each of the stair cases inside, equal in width and finish to those in the present building. These stairs to rise to the 3d story above the basement, and to have two marble fronts each, per plans. Provide and set marble hearths to all the fire places, with suitable marble mantels as may be directed by the architect, to cost from 25 to \$100 each.

Provide and set in cement, on pavement, over arches in corridor, stone flagging if required by the architect, and of such sizes as may hereafter be determined on. The flagging to be laid diamond shaped well jointed, the slabs to present an edge not less than  $\frac{3}{4}$  of an inch deep.

Provide and set three skreens of two columns each with their antes, one in front of each stair way, and one on a line with the corridor, opposite the front or central entrance on 7th street. The skreen of the stair cases will be a series from the first to the third story, the columns, surmounted by arches, the details of which will be furnished by the architect.

#### SPECIFICATION OF THE CARPENTER'S AND JOINER'S WORK.

Prepare and fix in their places, in the building, all the *centers* to the arches, groins, and barrel forms, truly and strongly, made according to drawing, well supported by scantling and with suitable wedges under each support to slack off the centers when required by the state of the work of which the architect shall be the judge.

Provide and set in their places all the window frames with their sashes, hangings, and dressings, required about the buildings according to the drawings. The finish of such work to correspond with the windows in the present building.

Provide and set in their places, what pannel doors are required about the building, with their dressings, locks, and hinges, all to be finished in the same manner as the pannel doors used in the present building to which reference is to be had, and the drawings to be furnished by the architect, especially for the front door which must be equal in finish to that of the General Post Office.

Provide and fix to the wall suitable skirtings or wash boards, let into the floor, in all the rooms and passages according to drawings, laid on grounds to receive the plastering, and corresponding in general finish with those in the present building.

Construct a roof over each wing of the same scantling, and finish of that of the present building, prepared to receive the copper covering. Form in 3 the framing of these roofs suitable openings for sky lights, in such positions as the architect may direct. Construct also lantern lights around and over the same as may be directed by the architect. Construct over the arches of all the rooms a flooring of  $\frac{5}{8}$  yellow-pine plank, laid on heart-pine sleepers, resting on the arches, &c., free from knots and shakes, the flooring plank not to be more than six inches wide, dowel tongued and grooved, and secret nailed, and finished in the best manner—the surface of the floors being well smoothed down.

Provide angle strips of wood or iron as may be directed, and fix the same to the outer angles of the piers and walls in rooms, &c.

Provide carpet strips to all the fire places and door ways of mahogany. The carpet strip to the front door in first story to be of brass or bronze.

Provide trap doors in each wing, or at each end of the present building to communicate with the roof, by a suitable stair way to the same. All this work to be done in a masterly manner equal to that in the present building or General Post Office building.

#### SPECIFICATION OF THE PAINTING AND GLAZING WORK.

Glaze all the sashes about the building, after priming and sizing, with the best quality crown or plate glass, clear and free from spots or winds, bedded in putty and back puttyed and fastened. The sizes of the glass will be the same as in the windows of the present building according to their ranges or stories. All the sashes to be painted once in size, and three coats in oil, with the best quality white lead. Paint all the dressed wood work, inside, once in size and twice in oil; and all the outside wood and iron work three times in oil—using the best quality lead and oil. All the work to be done in the most masterly manner. Clean all the windows at the finishing of the building.

#### SPECIFICATION OF THE PLUMBER'S WORK.

Prepare and fix a copper covering to the roofs of this building; the copper to be of the same weight per square foot, and laid equally well with that on the present building. Form the requisite gutters and down-pipes, as may be directed by the Washington, D. C., *April 20, 1849*. architect. Finish round the sky-lights and chimney stacks, as may be directed, and do whatever work is necessary to complete and secure the roof from leakage. Provide and fix to the walls, &c., the necessary pipes for the passage of the bell-wires, while the brick work is in progress.

#### SPECIFICATION OF THE BLACK SMITH'S WORK.

Provide, as required, whatever of blacksmith's work may be wanted about the buildings, of clamps, chimney bars, window bars, and such like work.

#### SPECIFICATION OF THE IRONMONGERY.

The best quality of ironmongery, equal to what has been used in the public buildings here, and of the same description suited to the work requiring it, is to be used about this building: the carpenter

and joiner, therefore, will be governed by this rule in the use of any articles of this description about the work.

#### SPECIFICATION OF THE PLASTERING AND STUCCO WORK.

Plaster all the walls and ceilings of the rooms, corridors, and stair cases throughout the different stories, in three-coat work, floated to a straight and smooth surface, equal to that in the General Post Office building. The mortar used to be compounded of strong stone lime and fine, sharp, white sand, and put on as stucco on the walls and ceilings without hair. Run an impost moulding at the spring of the arches, along and around the entire corridor, in each story; run impost mouldings at the springing of the arches on two sides of the piers from which they spring; run projecting beads at the angles of all the groin arches, terminated in the centre by a rosette, patterns of which will be furnished by the architect. Run mouldings round the openings at the skylights, and form pannel-work and such enrichments as the architect may direct, for which drawings will be given.

Whitewash all the cellar walls and arches here in the best manner, if required; and clear off all plaster rubbish, and scaffolding in and about the building.

**ROBERT MILLS**, *Architect and Superintendent.*

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#### TARIFF OF PRICES

Of the different kinds of work proposed in erecting the Wings of the Patent Office Building; to determine the value of the same by measurement of the work when finished and in its place.

TARIFF OF THE PRICES, *For the Cut Stone work, measured in the wall, marble included.*

P. S. Reference to be had to the same kind of work in the present building.

Dolls. Cts.

Ashlar, nine inch bed, per superficial foot, measured on the face

Cube stone, plain face do do

Beds and bills do do

Square channeled sinkings, or rebates, per foot, running

Plain sunk mouldings, per superficial foot

Architrave of entablature, per square foot

Beds and bills do

Freize do

Tryglyphs each

Bottom bed of cornice do

Top bed of do

Drops on the cornice, lineal foot

Caps of Pilasters, each

Window sills, moulded inside, each

Blocking course over cornice, per sq. foot

Chimney architraves, per fool lineal

Do. coping. do do

Column shafts, per foot, superficial

Do. capitals, two feet diameter

Steps to stairs, inside per superficial foot

Window sills, per superficial foot

#### TARIFF OF PRICES

*Of tha Granite Work to the Wings of the Patent Office Building.*

N. B. For the courses of stone, reference to be had to those of the present building.

Dolls. Cts.

Ashlar, nine inch bed, measured on the face in the wall, per superficial foot

Cube stone, plain face, do do

Beds and bills, do do

Steps, do do

Door and window sills do do

Water table course do do

Plain sunk mouldings, do do

TARIFF OF PRICES

*Of the Carpenter's and Joiner's work on the Wings at the Patent Office Building.*

N. B. Reference to be had to the work on the present Patent Office building, as a guide to its quality, &c., also, to the specifications.

Dolls. Cts.

Basement story windows finished with dressings, complete, each

Principal or second floor windows finished complete, each

Third floor windows, finished complete, each

Pannel doors of basement, finished complete, each

Pannel doors in upper stories, finished complete, each

Centering for groin arches to rooms, per square, measured on the plan, including putting up and taking down

Centering for barrel arches do do



Framing, raising, and covering with boards for copper of roof, per square, complete

Framing for sky-lights, each

Forming gutter beds for Plumber, per running foot

Skirting moulding, per running foot

Flooring on sleepers, narrow boards, dowelled and secret nailed, per square

Mahogany hand-rail, straight, per running ft. Do. do circular do

All other work required to be valued in the same ratio with the above.

#### TARIFF OF PRICES

*Of painting and glazing work, materials included.*

N. B. Reference to be had to the same kind of work done in the present building.

Dolls Cts.

Glazing, painting, and cleaning windows, basement story, each

Do. Do. principal story, each

Do. Do. upper story, each

All other glazing and painting of windows to be valued by the same rule according to number of lights or superficial feet

Painting three-coat work, white lead, including materials, per square yard

Fancy painting, currlid mapple, oak, mahogany, per square yard

#### TARIFF OF PRICES

*Of the plastering and slucco work, materials included.*

N. B. Reference to be had to the same kind of work done in the present building, and referred to in specifications.

Dolls. Cts.

Three coat straight plastering, floatwork, per square yard

Do. arch or circular work, do

Angle beads on groins, per foot, running

Corner beads or strips, do

Nine to 12 inch rosets, each

Impost moulding, under 12 inch girth, per foot, running

Do. circular, do. do

Sunk or raised pannel work, per square yard

*TARIFF OF PRICES, Work only, and including materials for the Plumber's work on the wings of the Patent Office building, measured in the building.*

N. B. Reference to the present building for the manner of doing the work, &c., and to the specifications.

Dolls. Cts.

Covering roof with sheet copper, as in the present building, and materials, per square foot

Do. do. work only, do

Gutter fixing, do. do. do

Do. do., materials, included, do

Flashing against the walls, &c., per running foot

Down pipes, six inches diameter, per running foot, including materials

Do. do. do. work only

Headings and footing of do., each do

TARIFF OF PRICES

*For the blacksmith's work on the wings of the Patent Office building, including iron of the best quality.*

Clamps, chimney bars, window bars, hold fasts, and such like work, per lb

White-smithing, per lb

Screw bolts, with nuts, per lb

TARIFF OF PRICES

*For the Mason's Work.*

For laying foundation-stone, including labor and scaffolding, per perch

TARIFF OF PRICES

*For the Bricklayer's Work.*

Laying bricks in walls and arches, including laborers and scaffolding, per thousand

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