SPECIFICATIONS

FOR

FRAME HOUSES,

RANGING IN COST FROM

Two Thousand to Twenty Thousand Dollars.

By WILLIAM T. HALLETT, *Architect.*

THIRD EDITION,

(REVISED AND ENLARGED.)

New-York:
BICKNELL & COMSTOCK,
Architectural Book Publishers,
No. 194 BROADWAY.
AND
W. T. HALLETT, 111 BROADWAY.

1881.

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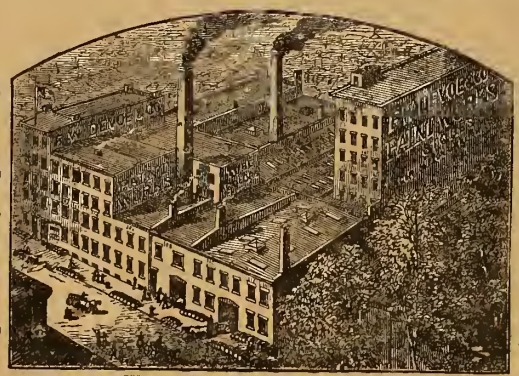

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EXPLANATORY.

A part of this specification was printed some little time ago, to ascertain, among other things, whether a printed form could be made available in practice.—The experiment in the main proved satisfactory.—Clients were pleased with it, and contractors read what was to be done apparently with far greater ease than they did manuscript ; and I have found work better executed in consequence.

The labor, too, saved, not only in writing but in copying ; together with the advantage of a more amply written and perfected specification, rendered the work valuable.

With regard to the method or plan, — it may be said, it is that adopted in my own practice ; and of the specification itself, — it has been adapted to a special class of buildings, of a stated range of cost.—It was not intended for publication until — when nearly finished— it was solicited by the publisher.

In filling out a form, it will be noticed how easily in many instances a desired change may be made by drawing the pen through even a single word,—and again, when supervision is not intended, the pen drawn through the clause of a sentence on page 1, relating thereto, will leave the remainder complete.

Should additional space be needed, a leaf or two can be inserted, paged as the half and the quarter.

Pages 13 and 20 are double ;—after a decision has been made whether to use slate or shingles, one of each of them can be abandoned.

W. T. H.

Trinity Building,
No. 111 Broadway, New York,
February, 1873.

NOTE TO THIRD EDITION.

A new edition of this work has been called for.

Such changes as time has suggested have been made, so that in issuing the revised work the care bestowed on the same, it is believed, will render the specification more valuable.

W. T. H.

January, 1881.

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CARPENTER AND JOINER.

SPECIFICATION of work and materials for the Carpentry and Joinery of a to be built for Mr.
on land owned by
State of from drawings made for the same by

—and under his supervision and direction.

Description of the Drawings and Specifications.

The "*general drawings*" are made to a scale of one-fourth of an inch to the foot.—They consist of *plans* of the building at every floor level; *elevations* of every side of the building, and *sectional drawings* of the heights.—

There is also a full set of "*detail drawings*," which, with the former, show all dimensions, sizes, heights and delineations of the proposed work.

The drawings and specifications *are the property of the Architect*, and are *returnable to him* on completion of the work.—They are to be used for this building *only*.—The contractor will make no alteration in any of them, and should an error appear, he shall duly notify the Architect, who will make proper adjustment.—The notes of explanation on the various drawings are to be carefully followed, as they, together with the drawings and specifications, are all parts of the contract.—

It will be observed that the specifications continually refer to detail drawings, and this is done as often as possible, the work being represented thoroughly by full size drawings.

General Notes.

The measurements of underpinning, foundation, and the framing that rests upon the underpinning, are all to be tested, both before and after work is done, that no mistake may take place in the bringing together of these three classes of work.—

The moulded or cut-out-work on the ends of brackets, rafters, and the like, is all to be wrought from the *solid*, with no *nailing on* of any part of the stuff. All curved or circular finish of base board, architrave casing, or outside work, is to be sprung on, or worked from the solid, so that no kerfing shall be visible;—this is especially applicable to hard wood finish.—

All architrave and other mouldings on the detail drawings are to be formed with exactness; those to doors and windows must have "*Mould Irons*" made for them—and no substitution whatever of *mill-mouldings* for those on the details will be allowed.—

Carpenter will do all usual and necessary wood-work for and after the several craftsmen of the building;—he will provide and set centres on which to turn arches—and no arch is to be turned without one—will make all patterns needed,—will provide and fix temporarily, doors and sash for keeping out the cold, rain, &c., and clear the building and the premises at the completion of the work of all rubbish, caused by building operations, and sweep the house.–

The Plasterer will provide coal and stoves in cold weather for heating the building while his work is going forward and until it is dry.—The carpenter must provide stoves and coal when the work is not in the hands of the plasterer, at such proper times as the Architect shall direct.

Carpenter will provide all materials and perform all labor in his department, for finishing the building according to the drawings and specifications, and their true intent and meaning. He must be responsible for violating all laws regarding street and side-walk obstructions, etc., and hold the Proprietor harmless from damage and expense arising from such violation, until his work shall have been delivered and accepted.

Quality of the Work.

The work is to be done in a good, thorough, workmanlike and proper manner throughout.—The joinery is to be close, smooth, true and well sand-papered;—the carpentry true and plumb; and the quality of other kinds of work as described under the various headings.—

Stock of the House.

Timber not exposed when finished, to be sound seasoned spruce.

Timber on the exterior of the building, that *is* exposed when finished, to be second quality, seasoned white pine, except the foot of main house rafter, which will be of spruce.

All lumber for the outside of the building to be second quality seasoned white pine, except the clapboards, which will be *clear* pine. (See Clapboarding,—page 11.)

Inside finish of clear dry white pine,—free from sap. Other finish as specified.

Description of the Frame.

NOTE.—The figuring of the heights of stories on the Sectional drawing is between timbers.

To be substantially framed, amply braced and plumbed. Sills, posts, girts and plates all to be framed together. Braces framed in. Outside door and window studs framed in at top and bottom. All other studs nailed in stiffly.—All partition studs to be double at the angles, blocked half way up, and *set particularly true and plumb.*

Three stories of floor joist, to be stiffly spiked to sill, girt and plate; also to each other where they lap in the middle of the house, or to the girts there.

CROSS-BRIDGING.—Bridge all floor joist in the building longer than 10 feet once, with 1 by 3 inch stuff, cut on the bevel, scribed and well nailed to the joist.

Substantially spike the rafters to plate, and project the lower ends beyond the face of the building, to carry the cornice and gutter, and finish them for paint.—(See detail drawings of Main Cornices.)

Put ridge boards to all the ridges.

Frame all trimmers and headers with mortice and double tenon, or tenon and tusk.

All partition studs, where it is possible, must set down *on* the supporting girt of the floor joist, and not on *top* of the floor.—

STRUTTING.—The building is to have 4 by 6 struts, extending from floor to floor in such *partitions* as lack support underneath.

Sizes of Timber.

Sills, 6 by 6 inches, halved at the corners.

Posts, 4 by 8 inches.

Enclosing girders, 4 by 6 inches.

Plates, 4 by 6 inches.

Braces, 4 by 6 inches.

Enclosing Studs, 2 by 4 inches, sixteen inches from centres. (See also the detail drawings of outside doors and windows.)

Partition Studs, 2 by 4 inches, sixteen inches from centres.

Floor joist all 2 by 10 inches, sixteen inches from centres. Those to first story to be notched in to the sill, and well spiked down.

Headers and trimmers, 4 by 10 inches.

Principal tie girders with partitions under them, 4 by 6 inches, framed into posts; where no partitions come under them, 4 by 10 inches. (See floor plans.)

Girders or plates to minor partitions, 2 by 4 inches, and 3 by 4 inches.

Main Roof Timber.

Principal rafters, 2 by 6 inches, two feet from centres. Hip and valley rafters, 3 by 6 inches. Ridge board, 1 by 8 inches.

Veranda Timber.

IN THE FLOOR.—Sills, 4 by 8 inches. Girders, 4 by 8 inches. Joist, 2 by 8 inches, sixteen inches from centres. Frame all these to each other, flush on the back, and frame the joist to the girders, with double tenon, or tenon and tusk.

Attach the girders in veranda floor to the house-sill.

IN THE ROOF.—Plate, Rafters, 2 by 6 inches, two feet from centres, scribed to a wall-piece against the house two inches thick. Hips, 3 by 6 inches. Posts, as per details, cased. Other dimensions from details.

Flooring of the House.—That for the kitchen, laundry, pantry and store room, to be of Georgia Pine, one inch thick, matched, in four inch widths, blind nailed.

The balance of principal story to be of second quality white pine, tongued and grooved $\frac{7}{8}$ of an inch in thickness, and five inches in width, nailed straight.

Second story the same as in principal story.

Third floor to have second quality white pine in wide boards, tongued and grooved.

Note.—All floors must run up to the outside sheating closing all spaces, so that mice cannot circulate through the walls of the house.

Veranda Floors,—Of inch and one-fourth stuff, second quality, matched, dry white pine, five inches in width, to have nose and cove. The top board of nosing to be three inches in width. Incline the veranda floor on a pitch of one inch.

Make all floors perfectly level, break the joints properly, and smooth down irrugularities, if any.

Deafening.—Prepare the floor in

for deafening, with cleats one inch by two inches in width, and nail them three inches down from the top on both sides of the joist; put in inch hemlock boards, cut short,—crosswise of the joist, and nail in the same for the reception of the mortar.

Base Boards.—Get out base-boards like the detail drawings, house them together at the angles, block them behind, so that the plaster may run to the floor.—They are to be of the same kind and quality of stock as the other finish of the rooms in which they are put down, laid close to the floor, and scribed to the door casings.

Note.—The moulded portion of a base-board should never be returned down to the floor where there is nothing to stop against, but should be turned back to the wall, or mitred on itself. The same of plaster, and wood cornices, and similar mouldings.

Doors.

With the exceptions mentioned below, the doors are to be made of clear, dry white pine, free from sap, and double-faced throughout the house;—they must conform to the drawings in every particular, and have Georgia-pine thresholds throughout the building, with the exception of the first story of main house, which will have black walnut.

Note.—There are to be transom lights and sash doors, as represented by inch scale and detail drawings;—the transom-sash to be hung
and to have to fasten the same, with an inch knob of porcelain. Transom-light to main entrance and vestibule doors to be hung with pivots, and to have brass snap-catch at bottom.

Kind of glass in the Doors.—

Sizes of Doors.—First story, 7 feet 6 inches, by 2 feet 8 inches, by $1\frac{3}{4}$ths inches;—closet doors to same, 2 feet 6 inches wide, by $1\frac{3}{4}$ths inches.

Second story, 7 feet 4 inches, by 2 feet 8 inches, by $1\frac{3}{4}$ths inches;—closets to same, 2 feet 4 inches, by $1\frac{3}{4}$ths inches.

Third story, 7 feet, by 2 feet 6 inches, by $1\frac{1}{2}$ inches;—closets, 2 feet 4 inches wide, by $1\frac{1}{2}$ inches.

Note.—For sizes not specified, and forms not regular, see inch scale drawings.

Trimmings.—Every door in the building must have pair of loose joint butt-hinges of sufficient size to throw it clear of the architrave mouldings.

Doors in domestic apartments to have four inch , best, cast iron butt-hinge, subject to the above condition.

All closet doors must have knobs inside as well as outside.

The double doors to have knobs to each fold, with which to handle the same,—escutcheons to one door only.

Locks.—Every door in the building, except that to main entrance, to have a first quality, five inch, single tumbler, mortice lock made; to have brass face and striking plate, and brass bolts and steel springs inside.

Lock to main entrance door

Keys.—Every door in the house must have a key; the main entrance door, two keys; and there will be the following changes:—store room, china closet, linen closet, wine cellar, and each chamber.

Knobs.—Put on first quality white porcelain knobs and furniture, with silver electro-plated rose, complete, in two stories of the house.—Main entrance and vestibule doors to have knobs of

Domestic apartments to have best quality mineral knob with iron escutcheon.

Sliding Bolts.—The double doors to have sliding bolts at the top and bottom, substantial and strong, of equality with, and to match in style, the lock finish.

Base Knobs.—All doors opening against the plaster wall, to have small base knobs of hard wood, with rubber tips.

Mortice Bolts.—Every chamber door in second story main, to have a mortice bolt, 1½ by 2 inches, with 2 inch knob of same kind and quality as that to

the lock ; to have brass striking plate.—All outside doors except those to hatchway will also have them.—

Notes about Doors.—Face casings to doors and windows will not mitre at the top, but will go square across,—the mouldings will mitre.

Doors that finish in Stain must have care that no sand papering is done except with the grain of the wood.

None of the architrave mouldings in the building, either of door or window, except in top story, to be spliced.

Hatchway Doors to Cellar.—Those outside are to be made of inch and a quarter stuff, second clear pine, in six inch widths, matched and beaded.—They are to be cross-battened on the back side ,with inch and a half stuff, six inches in width, beveled all around on the edges, the battens running as near the outline of the door as the proper operation of the same will allow.

To have four battens to the fold, screwed on.—The doors at the meeting rails to be rebated.

The head of the door to be properly constructed that no leak may occur.

Make the jambs of the hatchway above ground of board, and nail it to 2 by 4 studding, having two iron dowels each, leaded to the stone coping.

Shed the foot of the door over the top step-stone, to throw the water.

Trimmings.—Hang the doors with three sets of heavy strap hinges to each fold,—and attach a heavy oak bar on a strong pivot inside the doors, to fasten the same.—

Hang the inside doors at the foot of the steps to 4 by 4 finished studs, rebated out to receive the door, the same stuff to pass across the door top.—This frame to be made perfectly stiff and secure in its place, air-tight, with mortar, if necessary :—the doors themselves the same as is specified for the outside doors here.

Windows.

Make the windows throughout the building to correspond with the several drawings.

Frames.—Outside casing, of second quality pine, as has been specified under "Stock of the House,"—pulley stiles of second clear, housed at top and bottom, and heavily spiked, having good cast iron sheaves and pulleys. Screw on pocket caps of suitable length at the bottom of pulley stiles.

Sash.—Of best, clear, dry, white pine,—with acorn-mould sash-bar; counter check rails,—to be double hung with best hemp cord, and balanced. The sash mullion must be full $2\frac{1}{2}$ inches in width, as shown.—

Note —Windows opening on hinges, have detail drawings furnished for them.

Panel backs, panel jambs, boxing for blinds, and soffits,—

Inside Blinds.

Outside Blinds.—Cover the windows of the building with blinds, with the exceptions below named.—Provide, trim and hang first quality blind, sand prepared, of clear, dry white pine, $1\frac{1}{4}$ inches in thickness, with rolling slat, and with three rails to the fold generally, and four rails to the fold of the windows opening on veranda.

The trimmings to be heavy and substantial, with catches midway of the blind having a slide stop to prevent opening the blind from the outside;—they must be submitted to the Architect for his approval before putting on.

Glass.—The house to have first quality "double thick French" glass, except that specified for doors; that for third story, to be single thick French. The glass to be bedded, back tacked, and well puttied.

Trimmings.—To have a sash-fastener to every window in the house that does not fasten with a button.

Those in the domestic apartments to be of heavy black japanned iron, with large porcelain tips.

The balance of the house to have

Sash Lifts.—

Cellar Windows.—The frames are to correspond with the detail drawings and are to be made of second quality white pine, bedded in mortar, set before the underpinning is laid, and primed *before* they are set.

The sash to be made of clear stuff, hung at the *side* with suitable butt hinges, having a button of iron to fasten them.

The window must be protected with a grating of iron rods, five-eighths of an inch in diameter, placed perpendicularly, three inches from centres, and let into the frame at top and bottom.

Dormers.—To be got out like the details, of second quality pine for outside work; and of clear stuff inside.—They must be made perfectly secure from leak at all points, and as per details.—The cheeks to be step-flashed, and the cheek board set entirely over the tin, *that* being turned up broadly on the inside; the tin to be painted on one side before putting on.—

Note.—The windows opening down to the floor are to have cased heads and followers.—There will be inch furring on the face of cased heads, and the enclosing studs will be furred out to this line, that there may be no break in the wall-surface of the room.

This will cause a wider pulley stile to be put into such windows and an extra stop for the outside blinds to shut against.

It will also necessitate trimming the floor-joist above where they come endwise to the window, in order to allow the bottom-rail to slide up to the meeting-rail.

Note.—Cover the tops of all outside window casings with tin; tack the tin closely on the top, run it under the weather boarding at least two inches and paint it.

Stairs.

Main Stair-Case.—To be built as shown by the floor plans, on three stretches of two inch plank in a substantial manner.

To have board riser, one and a quarter inch tread, tongued and grooved to each other, both housed into the wall-string.—To have rise and tread as indicated by figures on the floor plans, fractions, and variations in building excepted.

Treads and risers to be wedged, glued and blocked.

To have nose, fillet and cove and bracket.

Newels, Hand-Rail, and Balusters, to correspond with full size drawings, and be made of selected dry black walnut,—the hand-rail closely bolted at its joints, and properly stayed; the balusters dove-tailed to the treads firmly, and the newell secured substantially to the floor.

The stair-case to be lathed and plastered on its back and properly stiffened at all points with none but close and true work visible in its finish.

It must be carefully covered with carpeting or the like, if built before the hard finish goes on, and closed up at top and bottom after finishing, that none may travel over it before the building shall have been completed.

NOTE.—For paint and oil, see page 22.—

ATTIC AND KITCHEN STAIR-CASES.—To be substantially built as shown by the floor-plans, of second clear stock,—treads and risers, tongued and grooved to each other.—To have nose but no cove, the strings beveled.

These stair-cases to be lathed and plastered air-tight on their backs.

CELLAR STAIRS.—Of plain substantial work, planed stuff, inch treads with nose, no cove, board riser, 2 inch plank strings;—the stair-case neatly finished at top, cheeks boarded perpendicularly with inch stuff matched to within three steps of the bottom.

Outside Work.

SHEATHING-BOARDS.—Cover the frame of the building with best rough hemlock boards, one inch in thickness, put on *diagonally* with a close joint, nailed firmly.—

CLAP-BOARDS.—Put on best quality, *clear*, dry, beveled, white pine clap-boards six inches in width, by half an inch in thickness at the butt, and one quarter inch thick at the thin edge.—Put the boards on with *one inch lap*, and *set in* the nails for puttying.

CORNER BOARDS.—To be of inch stuff, four inches only in width, with plain angle.—

Frieze-Board,—so called,—(see details of main cornice,) to be rebated out all around the building, (on the gables as well,) to receive the edge of clap-boards, that all may be weather-tight.

Water-Table, or Exterior Base Mouldings.—To be constructed as per full size drawing.

Veranda.—The timber for the floor and roof, and the floor-boards, have been specified.

The roof-boards are to be of $1\frac{1}{4}$ inch second quality pine, in narrow widths, matched and beaded ;—cornice as shown by details, posts cased and executed as detailed ; the whole substantially secured to the house,—The face-work of veranda under the nose-and-cove to be executed like the several drawings.

Wood Steps.—To be built on three stretches of two inch plank, with inch and a quarter tread, nose and cove, board riser.

The steps to be closed in at the ends with inch stuff placed perpendicularly, made up close and substantial.—The strings to rest on stone, put in by the mason below frost.

Railing to Steps and Veranda.

For Veranda Timber, see page 4.—
" " Floor, " " 5.—

Principal Roofs.

Roof Boards.—Put on substantially best hemlock or spruce boards, of inch stuff.—Break and smooth down the joints properly, and straighten and make level everything before any shingling is done.

Stripping,—three inches by inch and a quarter, of spruce, may be used if preferred, in the place of boards,—which must be nailed substantially.

The finishing boards at the eaves exposed from beneath when the roof is completed, are to be inch and a quarter, narrow, matched and beaded, dry stuff.

Shingles—Are o be put on in three thicknesses, the butt and tip lapping two inches.—They are to have two nails to the shingle, properly laid, and to stand away from the angle of the valley one inch only.—This makes a narrower and handsomer valley (2 inch) than is usual.

Quality and kind of Shingles.—

Note.—For Tin-work, see page 19.

All outside work to be executed so that no leak shall take place, and as shown by details.

Principal Roofs.

Roofing Plank.—Put on wide plank one and a quarter inches in thickness, tongued and grooved, finished on one side at least, so laid that the joints shall break properly, the joints smoothed down that the slate may lie evenly.

To be second quality seasoned spruce plank.

The ridges and eaves, and the roofs at all points, must be made perfectly level and true before the slate goes on.—

The finishing boards at the eaves are to be inch and a quarter thick, narrow, matched dry pine.

Put on two inch rolls to all hips before the slate goes on, and carry them to the outer face of the cornice, *over* the gutter,—these will be covered with zinc.

For Tin-work, see page 19.

Verge-Boards.—Their supports, and short rafters behind, are to be as per details, twenty inches apart, and put up in a substantial manner.

Main Cornice.—This and the gutter must be made to correspond with the full size drawing, perfectly firm, straight, and true.

Furr the gutter inside sufficiently to throw the water to points indicated for the location of conductor-pipes.

Foot of Rafters.—

Scuttle.—

Crest.—

Inside Again.

Presses.—All clothes-presses, and closets in the chamber stories, are to have two rows of double, black japanned, iron hooks, placed nine inches apart, breaking joint with those on the other rack.

Make the racks three inches in width, with an eighth inch bead on the lower edge, and pass them all around the closet.—Place the upper rack 5 feet 6 inches from the floor ; the lower one, 4 feet 6 inches from the floor.

Shelf.—Put in a shelf of inch stuff, clear, to each press, with an eighth inch bead on lower edge.—Shelf to rest on cleats formed like the detail given for pantry shelving.—Shelves longer than four feet, will have a cleat along their full length, while sections shorter than that, will require cleating only on the ends.—The bottom of cleat to touch the rack.

Linen Closet.—To have three drawers made of clear pine, in the manner and style of the details furnished for the drawers in china-closet, and kitchen-pantry.—They must each have a *good*, strong, lock and key, and two 2 inch mineral knobs.

Dimensions of Drawers as follows :—sixteen inches deep each in the clear, the lower one starting three inches from the floor,—an inch parting strip between each drawer, with nose and cove, at top.—

The length and width to be taken from the floor plans.

Put in an inch stile against the wall at each end.

Put in two rows of Hooks on racks as specified for presses, avoiding the drawers and shelving.

Shelving.—Put shelves the width of the drawer, directly, over the same, two feet apart, going to the ceiling.

Closet in Main Entrance-Hall—To be fited up with two rows of hooks on racks, shelf, &c., like the specification for clothes-press.

Kitchen-Pantry.—Fit up the kitchen-pantry with shelves, cleats, standards, closets and drawers, as per details provided for the same, and as per plan of principal floor.—All this work to be of clear white pine, finished for paint.

The closet doors are to be hung with iron butts, and to have inch and a quarter mineral knob and iron button.—The opposite fold to have a hook or bolt on the inside, to fasten the same.

Doors to be seven-eighths of an inch thick, paneled, and two of the closets to have each a shelf.

The Drawers—Must be made like the drawings, provided with two mineral knobs to the drawer, 2 inches each in diameter.

Standard.—To be in one piece from counter to top shelf, let in neatly.

Cleating.—To be got out at the mill as per detail, and used for all shelving in the building ;—put it up on the back side of all *pantry* shelves as well as on the ends.

Shelving to be seven-eighths stuff, beaded on one edge only,—$\frac{1}{8}$th.

Pastry Board,—

Butler's Pantry, or China Closet.—Put in drawers, closets, shelves, standard and cleat, like the inch scale drawings prepared for kitchen pantry and china-closet, and as per first floor plan,—and finish the work in every particular as has been specified for kitchen-pantry, with the exceptions that the drawers and closets are to have inch and a half porcelain knobs, and the doors trimmed with brass butts and brass buttons.

Sink in china-closet,—will, with its marble top, be provided and set by the plumber; is to be closed up beneath with three inch matched and beaded pine, placed perpendicularly.—Doors and trimmings like the others in china closet.

Sliding Panel.—In the china-closet as per floor plan, eighteen inches wide by fifteen high in the clear.—Put in one and a quarter inch, flush-panel slide, moving sidewise on a track of wood, and put an inch knob of porcelain on both sides of it.

Case the opening with a four inch moulding resting on the counter-top, which will make two feet ten inches from the floor the correct height for setting the top of scantling on which the track rests,—set the track before plastering.

Store Room.—

Dresser in Kitchen.—

Kitchen Sink—Will be of iron, provided and set by the plumber. To have a Drip, as indicated on plan of one and a half inches in thickness, with a stop mould around the outer edge, ploughed in, water tight; set the drip on an inclination of two inches, rounding the edge, and support it substantially,—nothing closed up beneath.

Wainscot behind the sink,—of seven-eighths matched and beaded in three inch widths, placed upright, two feet in height, with a single cap-mould neatly finished. *House it into the drip*, that no leak behind the sink may take place.

There will be about running feet altogether of the wainscot.

The iron back to the sink will set on the face of the wainscot, and will be provided by the plumber.

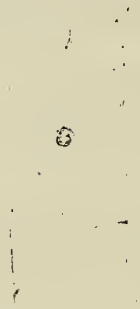
Laundry.—Set three stationary wash-trays in the laundry, as shown on plan, of clear, seasoned white pine, two inches thick, housed together at all points in white lead, a perfectly tight job.—To be in dimensions precisely as per *inch and-a-half scale* and detail drawings.

The trays are to have flush panel covers, of the thickness and construction detailed, of pine, and not hung. Hanging stile behind, and parting strips between covers, as shown.

Bath Tub—To have two-paneled riser, with five inch, ogee, moulded rails and stiles, executed in clear, white pine.—The rim of the tub to be of black walnut, with nose and cove on face, the inner edge rounding over smoothly, to shed the water, forming a finish—the wainscot must be housed into the rim water-tight, or the work will be condemned.

Wainscot to be made of four inch matched and beaded stuff, placed perpendicularly, two feet 6 inches in height above the tub about feet in length, with a plain cap moulding, executed in clear,

Tank :—See page 23—to be made of two inch thick white pine plank,



Water-Closet.—Make the riser, lid, and seat, of selected dry black walnut of smooth work.

Hang the seat and the lid with brass butts, and hollow out the front edges by which to raise them.

Put the whole thing together with blue headed, or brass screws, that it may be taken apart without injury, and put an eighth inch bead on the work generally.

Basins.—Close up beneath the basins with doors, as specified for kitchen pantry, and with three inch dry *pine*, matched and beaded, placed perpendicularly.—Angle-basins to have back-battened doors, with an eighth piece placed on the top edge of door, forming a bead and a finish.

Angle Beads,—plain.—

Wood-Cornices and Centre-pieces.—Get out and put up cornices and centre-pieces of clear, dry, in main hall and in rooms of the principal story, in accordance with the Details.

Put grounds of pine on the studding, of the exact width shown, which will cause the plaster joint to be covered by the cornice.—This is applicable to the Centre-pieces as well as to the cornice, though the grounds to the former must be adapted on the joist.

Screw the centre-pieces to the grounds after the plaster shall have dried.

Cold Air-duct to the Furnace.—Construct a cold-air passage to the furnace from the opening in the wall, and make it of matched pine, *air-tight*, and to suit the requirements of the furnace-man.

Insert a slide damper of board half way between the furnace and the cold air-hole, then put in a hinged door, with button of wood about half way between damper and furnace also air-tight,—to be ten inches by the width of duct in length.—This to use the air in the cellar during a gale of wind.

Stretch coarse galvanized wire netting over the mouth of the air-box, fine enough to keep out mice; and set iron rods in the frame to match those in the cellar windows.—

Bells.

Provide and hang in the kitchen, on a plate of board, a six inch Gong-bell, connected with the principal entrance door; also, provide and fix a straight bell-pull and plate, to match in size, design and material, the door-knob.

All the bells must be substantially and tightly attached with copper wire, carried in quarter-inch tin tubes, the tubes placed on the lath before plaster is put on, and to have all requisite turns, springs, pull-backs, &c.

Provide and hang where directed, in the kitchen, on a wood plate,
swing bells, about three inches in diameter at the mouth, of various sizes, and connect them with the following rooms:—they are to have in the rooms crank lever pulls, of best white porcelain; the rims and lever electro-plated in silver, with a tip of porcelain.

Speaking Tubes.—

Use best charcoal single-cross (×) Tin.

Cover the with small sheets, laid flat, the joints well locked, using three nails to the sheet, all thoroughly soldered. Go over the work, and stop all leaks after all the craftsmen have left the building.

Tin the tops of window heads as specified on page 10.

Do the tinning all around dormers, as specified on page 10.

Gutters.—Carry the tin over the face of the cornice three-quarters of an inch *only*, and tack it closely.—Pound it well down, flat and hard, to avoid a ragged look from the ground.—Line the gutter properly, run the tin under the *shingles* ten inches, and direct the water towards the conductor-pipes with furring, before starting the tin work.

Conductor-Pipes.—Use best charcoal, double cross (× ×) tin for the conductors. Put them up where indicated by the elevations, and connect them with the drain-pipe in the ground, which will start directly beneath the conductor.—Secure them in position substantially and paint them inside by turning thin liquid paint in at one end, and revolving the pipe slowly until the paint drips out at the outer end.

Contrive elbows at the top handsomely, avoiding the universal 'sprawl' here.—Put in also neatly formed *breaks* wherever necessary.

The sizes of conductor-pipes will be as follows:

Those to main house,	4	inches in	diameter.
" " wing,	3	"	"
" " veranda,	3	"	"
" " bay-window,	2	"	"
" porch,	2	"	

Veranda, bay-window, canopy and porch, to have tin run under the clap-boards at least ten inches, to avoid absorption of water above the tin when banks of snow lie melting against the house.

Paint all tin-work two coats.

Tin all usual places that require to be water tight, whether specified or not.

Slater.

Cover the roofs with best selected
inches by inches in size, laid in two thicknesses, with the tip and butt lapping three inches,—the slates to be trimmed properly and drilled.—Put them on with best *tinned*, flat headed, slate nail, two to the slate, and warrant the job perfect for one year.

Lay all valleys *open* two inches in width *only*.

Lay the work with three bands of cut slate at regular intervals. in the pointed or octagonal manner—as the Architect shall specify—each band consisting of three courses.

Felting.—Line all slate with
carefully stretched and tacked on.

Flashing.—Flash all hips, ridges and valleys with heavy zinc of full width—that in valleys to be fourteen inches in width—and cover the wood-roll on hips, dormers, &c.

Flashing around Chimneys.—Flash the chimneys with zinc, and step-flash those that are on the rake of the roof,—cap the flashing, and turn the zinc into the mortar-joint, and point the brick work after finishing the flashing.

(The flashing extends perpendicularly under the cap and terminates.—The cap, which is secured in the brick-joint, follows down plumb to within a half inch of the slate, and there stops.—This will allow the zinc to expand without injury.)

Valleys.—Line the valleys with tin, fourteen inches in width,—solder it well and paint it on the upper side, as the workmen go forward.—Put in two inch valleys—*no wider*—throughout the work.

Flashing around Chimneys.—Flash the chimneys with tin, step-flashing those on the roof-rake.— Cap the flashing, and turn the edge of the cap into the mortar-joint, and point the brick work after finishing the flashing.

The flashing on the roof-plane will lie between the two upper courses of shingles, and extend perpendicularly under the cap.—The cap turning into the brick joint, then following down plumb only, will terminate a half inch above the roof.

This construction allows the tin to expand and contract, without damage to the work.

Painter.

Provide all materials, and perform all labor for the full and proper painting of the building.

Cover all sap and knots, all pitch and gum, both inside and outside of the building, with a coat of strong Shellac before applying the priming coat.—NOTE.—All nail-heads in the work both outside and inside, will be *set in* by the joiner.—Putty up the work inside and outside *smoothly*, after it shall have been primed. Use all necessary dryers, &c. in the work.

OUTSIDE.

Paint the exterior work three coats of

COLORS.

Body of the work and the conductor-pipes, of

Trimmings

Blinds

Sash

Outside-doors,

Veranda floor

Ceilings of canopy and veranda,

Brick work

Trim the outside work as follows :—

TIN.—Paint the tin-work as has been specified under the head of "Tinner," page 19, two coats, the conductor-pipes three coats.

INSIDE.

Sand paper well the work to be painted, and 'clean out' all the mouldings before priming; also sand paper between two coats of paint.

Paint all white pine work three coats of best White Lead and pure Linseed Oil, in the tints named below and finish the last coat with pure Spirits of Turpentine.

COLORS INSIDE.

Paint all shelving in the house the color of the adjoining room.—In the kitchen-pantry and china-closet, the upper surfaces of the shelves will remain *without* paint.

Oil all hard wood in the building except stair case with a coat of raw linseed-oil, well rubbed in, and thereafter with another light coat also rubbed in.—Hard wood floors to have

Paint the sash inside, the color of the room in which it is hung, two shades lighter.

MAIN STAIR-CASE.—Smoothly sand paper the hard wood of the stair-case and finish it with

VARNISH.—Varnish the painted work in the kitchen, laundry, china-closet, pantry, storeroom and bath-room, two good coats of *best* Copal Varnish.

PLUMBER.

General Notes.

Provide all materials and perform all labor requisite for putting up and finishing all the works, in a good and workmanlike manner, according to the Specification, and its true intent and meaning.—

Weight of Pipe.—All Lead Pipe, except Waste, to be "A" pipe (standard to be specified).

Put up all pipe with best hard metal tacks and screws.—

Calk all iron pipe with molten lead, and fix it in position with strong iron hooks.

Make all Traps of lead, generally of the S form,—fill in their bottoms with solder, and put a brass trap screw to all of them except that to water-closet.

All Plating to be of good silver electro-plate.—

Lay all pipe in the laundry and kitchen on narrow, inch-thick pine strips, *exposed.*—

Avoid the putting up of pipe on outside walls, also undue cutting of the floor joist.

Pump.

Provide and fit complete, near the kitchen sink, a two and a half inch double-chambered Ship Pump, and put in a three-way stop-cock, to draw water from both Well and Cistern.—Excavate and fill the ground, and carry an inch and a quarter suction pipe to the well and the cistern within two feet of the bottom of both with a large perforated termination.—Carry one and a quarter inch rising-main to the tank with a check-valve just above the sink supply ;—insert in the rising-main just below the tank bottom, a finished brass lever stop-cock, where it can be easily reached, and place it well away from the cold.

Tank.

The size of the tank is to be feet in length, by feet in width, by feet in depth in the clear inside.—Line it properly with four-pound lead, tack the lining to the case with tinned nails in circles, and wipe the nail heads with solder.—Put in a *half-inch* tell-tale from the tank to near force pump.—Put in a two inch overflow connected with the

Put in a three quarter inch *air* pipe, connected with the supply main *under* the tank, then carry it either inside or outside of the tank to the top, and form the end like a hook, discharging *into* the water.

Boiler.

Provide and fit complete in the kitchen, on a cast-iron standard, a forty-five gallon, "heavy pressure," copper cylinder Boiler, with domed and riveted head, and inside with three bands and the usual copper tube. Connect the boiler and the water-back with three-quarter inch "A, A," pipe, and place a three-quarter inch finished, brass, lever Sediment-stop-cock at the bottom, connected with the sink-waste with five-eighths inch pipe trapped.—Put in two, three-quarter inch, finished, brass, lever stop-cocks over the boiler, to shut off the water.—Connect the boiler and the rising-main with three quarter inch pipe.

Kitchen Sink.

Provide and set in the kitchen, on iron legs, a cast-iron Sink with strainer, six inches, by twenty-two inches, by thirty-six inches, fitted with a patent cast-iron Back—Supply it with hot water through five-eighth inch pipe, and five-eighth inch finished, brass, lever faucet, fitted with flange and thimble.—Supply cold water from the pump direct, through three quarter inch pipe, and three-quarter inch finished, brass, lever faucet fitted with flange and thimble.—Put in a two-inch Waste trapped, connected with the drain.—

Butler's Sink.

Provide and fit complete in the china-closet, a fourteen by twenty inch, *flat-bottomed*, tinned and-planished copper, over-flow Sink.—Supply it with hot and cold water through half-inch pipe, and three-eighth inch plated Pantry faucets.—Put in an inch and a quarter Waste trapped, connected with the
also, put in a socket-strainer and plug and attach the plug with a plated metal chain of wire-gauge, *double*, No. 17.—Put in a best, veined, Italian marble slab and back, an inch and a quarter in thickness, with moulded edges,—the slab counter-sunk, and the back eight inches in height.—Sink will be closed up underneath.

Wash Trays.

Plumb complete in the laundry, *three* Wash-Trays, and supply them with hot and cold water through three-quarter inch pipe, and three-quarter inch finished, brass, lever wash-tray Bibbs, fitted with flange and thimble.—Put in two inch Waste trapped, connected with the drain, fitted with socket strainer and plug,—and attach the plug with plated chain of wire-gauge, *double*, No 12.

Basins.

Set where shown on floor plans, white marbled overflow Basins, fourteen inches in diameter, outside measure, and supply them with hot and cold water through half-inch pipe, and three-eighth inch plated swing Basin faucet, of *suitable size* and pattern.—Put in an inch and a quarter Waste, trapped, fitted with socket,

strainer and plug, and attach the plug with a plated metal chain of wire-gauge, *double*, No. 15.—Put inch-thick, best, veined. Italian marble slab and back, with moulded edges,—the slab to be counter-sunk, the back ten inches in height.

Bath-Tub.

Provide and fit complete, a best French overflow Bath-Tub, four feet and a half in length, by two and a half feet in width, lined with fourteen ounce, tinned-and-planished copper.—Supply it with hot and cold water, through three-quarter inch pipe, and three-quarter inch plated flange and thimble Bath-bibb.—Put in one and a half inch Waste, trapped, and connect it with the soil-pipe ; also, put in socket, strainer and plug, and attach the plug with plated chain of wire-guage, *double*, No. 15.

Shower.

Provide and fit up complete on a plate of board beaded—with the pipes exposed, and near the *middle* of the tub—a plain, *eight-inch*, tinned-and-planished copper Shower, supplied with cold water only, through five-eighth inch pipe and five-eighth inch plated Shower-stop-cock.

Water-Closet.

Provide and fit up in proper working order, a best, patent, pan, *valve*, Water-Closet, with large earthen bowl supplied with cold water through five-eighth inch pipe.—To have plated cup and porcelain pull.—Put in four inch cast-iron Soil-Pipe, as specified on the first page of *Plumbing*, closely connected with the drain, and trap it with a four inch Trap of six-pound lead, and without a screw.

Suction Preventive, and Vent.

Attach a two inch pipe of iron just *below* the soil-pipe trap and *above* all waste-pipes that connect with the soil-pipe; carry it to the exterior of the building well under the eaves of the roof at a point nearest the water-closet, and bend the end downward in hook form.—

Safes.

Supply a sufficient number of finished brass lever stop-cocks in the cellar to draw the water from all the pipes in the building at pleasure.

Gas-Fitting.

Provide all materials and perform all labor requisite for the full and proper operation of the work, according to the Specification and its true intent and meaning.—

Pipe the building with best wrought-iron Gas-pipe—of the various sizes required by the Gas-Company, and for the proper operation of the work, and use best malleable-iron fittings.—Secure all pipe substantially in its place, joint it in red lead and supply all necessary elbows, T's, etc., and test and cap the pipe after it shall have been put in.—Strictly avoid all undue cutti[illegible] —

PERMISSION TO CONNECT.—Pay the Gas-Company for and put in the service-pipe, from the street main, to the inner face of the cellar wall, and comply with all their usual regulations,—also do the excavations for the same.—

The location of Burners is indicated on the floor plans by a star (*).—If any of them have been obliterated, the full list below will supply the deficiency.—Place the outlets four feet nine inches from the floor, except those in second and third story halls and passages, and cellar,
which will be placed five feet six inches from the floor.

NOTE.—There are no gas fixtures included in the contract.

Put in outlets for Drop-lights and Brackets, as follows:

DROP LIGHTS.	BRACKETS.

MASON.

SPECIFICATION of materials and labor for the Mason-work of a to be built for Mr.

on land owned by
State of from drawings made for the same by

—and under his supervision and direction.

Description of the Drawings and Specifications.

There are "*general drawings*" of every side and every floor of the building, made to a scale of a quarter-inch to the foot.—

There is also a full set of "*detail drawings*," which, with the former, show all dimensions, heights and delineations of the proposed work.

The drawings and specifications *are the property of the Architect*, and are *returnable to him* on completion of the work.—They are to be used for this building *only*.—The contractor will make no alteration in any of them, and should an error appear, he shall duly notify the Architect, who will make proper adjustment.—The notes of explanation on the various drawings are to be carefully followed, as they with the drawings and specifications are all parts of the contract.—

It will be observed that the specifications continually refer to detail drawings, and this is done as often as possible, the work being represented thoroughly by full size drawings.

General Notes.

The measurements of underpinning, foundation, and the framing that rests on the underpinning, are all to be tested, both before and after work is done, that no mistake may take place in the bringing together of these three classes of work.—

NOTE.—The following is an extract from the Carpenter's Specification :—

"Carpenter will do all usual and necessary wood-work for and after the several craftsmen of the building ;—he will provide and set centres on which to turn arches—and no arch is to be turned without one—will make all patterns needed—will provide and fix temporarily doors and sash for keeping out the cold, rain, &c., and clear the building and the premises at the completion of the work of all rubbish caused by building operations, and sweep out the house."

The plasterer must provide coal and stoves in cold weather for heating the building while his work is going forward, and until it is dry.—The Carpenter will provide stoves and coal when the work is not in the hands of the Plasterer, and at such proper times as the Architect shall direct.

Mason must provide all materials, and perform all labor in his department necessary for finishing the building as well as for the several craftsmen and do everything according to the drawings and specifications and their true intent and meaning.—He must be responsible for violating law, and hold the proprietor harmless from damage and expense arising from such violation, until his work shall have been delivered and accepted.

Thoroughly protect new masonry from stormy weather, and lay all brick *wet* during the months of June, July, August and September.

NOTE.—No mortar shall be mixed in the cellar at any time, neither in winter nor summer.

Blue tint on the drawings indicates stone, *red* tint brick, and yellow wood.

Quality of Work.

Execute the work in a thorough, workmanlike and proper manner.—All stone walling must be plumb, well bedded and bonded,—all brick work solid and plumb, and the plaster walling made straight and worked to a true surface.

EXCAVATIONS.

Dig out the full depth of soil where the building shall stand, besides ten feet more in width all around it, and stack in two places on opposite sides of the lot, feet away from the cellar location.

Excavate the earth as may be necessary for building the various works, and as required by the drawings, and as much deeper as may be necessary to secure solid foundations.—Dig the bank away from the stone walls a foot at least—Excavate for outside piers and the like so that their bottom levels shall be three feet below the graded surface, and sink them twelve inches below the surface of any old ground besides.—Excavations for all pipes except those for gas and plumbing to be done by Mason.

LEVELS.

Build the underpinning to show out of ground as per Elevations, and level it up to a point indicated on a large Stake hard by.—Other levels can be found under other headings.—(NOTE.—Locate the stake before digging.)

GRADING.

Throw back and *ram* the earth against the cellar walls after the mortar shall be dry; level it with the bottom of underpinning, and use that thrown out of the

cellar for the purpose, providing more for proper grading, if necessary.—Slope off and grade the ground with care on all sides of the building, and leave the *soiling* to be done by the Owner.

TRENCHES.

Trench the cellar for chimneys, piers, partition and outside walls, so that the top surfaces of footings shall lie at least four inches below the cellar bottom.

FOOTINGS.

Put in footings of heavy rough stones, crosswise of the walls, not less than *ten* inches in thickness with at least *seven* inches projection from the wall-face or pier on all sides.—Put footings to chimneys, inside and outside piers, partition walls, and main walls.

CELLAR WALLS.

Properly lay the walls according to plans and dimensions in common cellar walling stone, rough-faced and neatly pointed inside, and ragged-faced outside, in good lime mortar.—Leave openings of suitable size at proper points for the various pipes.

UNDERPINNING.

Lay the underpinning as shown by the drawings, of

SILLS TO OPENINGS IN UNDERPINNING.

Build in to the wall, sills got out like the details, of

HATCHWAY.

Build Hatch-way as per plan and dimensions, with treads of blue-stone three inches in thickness, built in at ends and back, flush in front with the riser.—Risers of hard brick.—The jambs to be of same material and work as cellar walls, coped with three-inch-thick blue stone.—Lay all this work in lime mortar.

COAL SHOOT.

STONE STEPS.

Lay in the ground at the foot of all wood steps, two-inch-thick, fine axed blue-stone steps, of fifteen inches tread by the length of the wood step in length.

QUALITY OF BRICK.

Use *good hard* brick only, throughout the works—except in the house lining—and lay all face work with flush joint, except chimney tops, which will be struck.—

BRICK PARTITIONS.

As shown on plans, carried hard up to the timber, and to have openings of proper sizes left for furnace-pipes.—Build brick piers inside and outside of the house with footings as per plans laid up with care,—those outside in cement-mortar.

Arches.—

JOIST FILLING

Fill in between floor-joist—touching the floor and joist—brick laid in mortar, on top of, and flush with, the inside face of cellar-wall, and point air-tight the joint between brick and wood.—Pass the same all around the building.

CHIMNEYS.

Trenches, footings and brick as have been specified.—Build the Chimneys to correspond with the drawings,—the flues with flush mortar joints, *without* parging, narrowed slightly towards the top.—Carry all withes to the top of the chimney, and thoroughly clear the flues on completion of the building.—Top out in *half-and-half lime and cement* of selected brick, and as per drawings, and make the cap of

FURNACE FLUE.

Start the furnace flue at the cellar bottom level, and set an eight-by-eight inch *substantial* iron door there.—Put a cast-iron thimble for the smoke-pipe
inches in diameter, fourteen inches away from the floor-joist.—Carry the flue to the top of the chimney independently of all other flues—Build the grate-openings two feet four inches in width, by two feet eight inches in height at the spring of the arch, and turn there a flat arch.—Turn arches resting against trimmers four inches in thickness on which to carry hearths.

VENTILATORS.

Set best patent, lever, six by eight inch, black-*japanned* ventilators, (with double-cord,) in the following rooms:

Set five inch, cast-iron thimbles with lids in the brickwork of flues, for stove-pipes, as follows:—

BRICK WORK AROUND RANGE.

Lay out the work here as may be necessary for the pattern of Range furnished—not from the plan—and build all exposed work of selected brick, laid up with care.—Provide and set a Lintel ten inches in width by four inches thick by the width of the chimney breast in length, of rubbed stone.—Put in the foundations, as planned, and turn a four inch arch on which to carry the hearth.

NOTE.—Owner will provide and set the Furnace with its hot-air and smoke-pipes, registers and soap-stones complete;—he will also provide and set the Range, Mantels, Grates and Hearths, including that to Range, and furnish materials.—

BRICK LINING.

Line the house from sill to plate and ridges between studs with good Pale Brick laid firmly on edge in mortar.

DEAFENING.

Fill in one inch in depth of coarse mortar between the joist of the following floors,—

CELLAR BOTTOM.

Level off the Cellar bottom, *settle it thoroughly with water*, and cover it with cement an inch and a half in thickness, well worked down to a surface.—Compound the cement of clean, coarse, sharp sand and *best*, light, Rosendale Cement, three parts of the former to one of the latter.

SURFACE DRAINS IN CELLAR.

DRAIN.

Properly lay below frost, as delineated on cellar plan, a six inch, vitrified Tile-Drain, jointed in cement.—Start it under the cellar bottom at a point near the soil-pipe termination,—lay it on a pitch of at least half an inch to the foot, and connect it with the cess-pool.—Trap the drain six feet away from the building with six-inch *running* trap, and connect the cistern overflow with the same, at the most convenient point for its proper operation.

ROOF WATER DRAINS.

Properly lay below frost, on a regular and sufficient grade *to*, and connected *with* the cistern near its top,—lines of Cement or vitrified Drain-tile, as follows:—start mains of five inch calibre below frost, directly beneath the two conductors nearest each other at the front of the house, and carry them in opposite directions to the cistern at the rear of the building.—Tap the mains abreast the various conductor-pipes—connecting the former and the latter—with drain tile of sizes corresponding with the conductor-pipes themselves.

CISTERN.

Construct and finish a circular Cistern under ground at the rear of the house at a point below named, and sink it below the surface of the final grading feet.—Lay the walls of hard brick, eight inches in thickness, and ram the earth around them when dry.—Ram the bottom and lay it in brick on edge.—Dome the top *eight* inches in thickness,—start the arch well down and back it up so as to resist successfully all thrust and probable weight-—Lay all the brick in half-and-half lime and cement, and plaster the cistern inside and *outside* with two coats of *best*, clear, light Rosendale Cement.—Leave a man-hole twenty-four inches in diameter, and put on a cover of blue-stone three inches in thickness, burying the whole in the ground.—Lay a six inch tile-drain *over-flow* below frost, from the cistern near its top, and on a proper and sufficient grade; trap it with six inch *running* trap and connect it with the drain at the most convenient point for its proper operation.—Build the cistern of the following dimensions,— feet in diameter, by feet in depth in the clear inside.

Locate the cistern

CESS-POOL.

Build a circular Cess-pool at the rear of the house, and sink it below the final grading feet.—Lay the walls *dry*, rough faced inside, eighteen inches in thickness of similar stone to that in cellar walls;—draw in the walls towards the top in dome-form, perfectly substantial, leaving a man-hole two feet in diameter,—cover this with a flag-stone three inches in thickness and bury the whole in the ground.

Vent to Pool.—Build in to the top of Pool perpendicularly, as the work goes forward, a four inch drain-tile, and leave it standing two feet above ground.—Locate the Pool as follows,—

LATHING.

Lath the house with best Spruce lath of full thickness, free from bark, and lay it a full quarter inch apart, with four nailings to the lath, breaking joint at every tenth lath.—Finish all closets their full heighth.

PLASTERING.

Provide all materials, utensils, scaffolds, etc., and perform all labor necessary for the full and proper finishing of all the plasterers' work, in a workmanlike manner.—(See also General Notes on page 2, of Mason's specification.)

Plaster the house throughout with Three-coat work.

The ceiling of cellar will be lathed and plastered.

The attic will be lathed and plastered.

The backs of all stair-cases must be lathed and plastered.

Compound the Mortar in proportion of one cask of Lime to *two* of Sand, to one bushel of Hair,—the hair somewhat diminished in quantity in the brown coat.—Use *best* quality pure unslaked Lime, and clean sharp bank Sand, free from Loam and *salt*, and best, fresh, *long*, Cattle or Goat Hair.—Thoroughly mix the ingredients by *continued and faithful* working, and stack the mortar in the *rough* two weeks at least before putting it on.

Properly put on the Scratch coat, and apply sufficient force to secure a strong and sufficient key ;—level and float up the Brown coat and make it true at all points.

SCREEDS.

HARD FINISH.

Cover all brown mortar with best Hard-Finish compounded of finishing lime putty and plaster of Paris, and clean washed white Sand.—Mix them in proper proportions so as to secure with a sufficient amount of troweling down a good, handsome and workmanlike job.

Carry all Lath and Plaster to the floor.—Work faithfully up to the Grounds, make good all plastering after the various craftsmen, and remove all plaster-stains and discolorations at the end of the work.

PLASTER CORNICES AND CENTRES.

CONTRACT.

Articles of Agreement, made and entered into this.....

day of.....in the year One Thousand Eight Hundred and Eighty

.....By and Between.....

.....

.....Part of the First Part, and

.....

.....Part of the Second Part.

FIRST.—The said *part* of the second part *do* hereby, for.....heirs, executors, administrators or assigns, covenant, promise and agree, to and with the said *part* of the first part,.....heirs, executors, administrators or assigns, that .....the said *part* of the second part,.....heirs, executors, administrators or assigns, shall and will, for the consideration hereinafter mentioned, on or before the..... day of.....in the year one thousand eight hundred and eighty..... well and sufficiently erect, finish and deliver in a perfect and thoroughly workmanlike manner, a

.....

for and to the part of the first part, to be built on land situated in the..... of.....State of.....

agreeably to Drawings and Specifications made for the same by..... of the..... ....., Architect, and signed by the said parties, within the time aforesaid, in a good workmanlike and substantial manner, to the satisfaction and under the direction of the said.....to be testified to by a writing or certificate under the hand of the said..... .....and also shall and will find and provide such good, proper and sufficient materials, of all kinds whatsoever, as shall be proper and sufficient for the completing and finishing all the works of the said *Building* mentioned in the..... Specification, for the sum of.....

.....

SECOND.—The said *part* of the first part *do* hereby, for..... .....heirs, executors, administrators or assigns, covenant, promise and agree to and with the said *Part* of the second part,.....heirs, executors, administrators or assigns, that..... the said *part* of the first part..... ....., heirs, executors, administrators or assigns, shall and will, in consideration of the covenants and agreements being strictly kept and executed by the said *part* of the second part, as specified; will well and truly pay, or cause to be paid, unto the said *part* of the second part, or unto.....heirs, executors, administrators or assigns, the sum of.....

.....

Dollars, lawful money of the United States of America, in manner following:

First payment of $.....

Second payment of $.....

Third payment of $.....

Fourth payment of $.....

.....

.....

.....

.....

.....

.....

.....

when the building is fully completed, and after the expiration of.....days from its completion, and when the Drawings and Specifications have been returned to the Architect.

Provided, That in each case of the said payments a certificate shall be obtained from and signed by the said Architect, to the effect that he considers the payment properly due; said certificate, however, in no degree lessening the total and final responsibility of the *part* of the second part; and PROVIDED FURTHER, that in each case a certificate shall be obtained by the *part* of the second part from the clerk of the office where liens are recorded, and signed by said clerk, testifying that the said building is, at the time when the payment is due, free from all liens and claims chargeable to the *part* of the second part.

And it is hereby further Agreed by and between the said Parties:

THIRD.—That the Specifications and the Drawings are intended to co-operate, so that any works exhibited in the Drawings, and not mentioned in the Specifications, or *vice versa*, are to be executed the same as if they were mentioned in the Specifications and set forth in the Drawings, to the true intent and meaning of the said Drawings and Specifications, without extra charge.

FOURTH.—The Contractor, at his own proper costs and charges, is to provide all manner of materials and labor, scaffolding, implements, moulds, models and cartage of every description, needful for the due performance of the several works; and render sufficient facilities to the Architect for the inspection of the works.

FIFTH.—Should the Owner, at any time during the progress of the said works, require any alterations of, deviations from, additions to, or omissions in the said Contract, he shall have the right and power to make such change, or changes, and the same shall in no way injuriously affect or make void the Contract; but the difference shall be added to or deducted from the amount of the Contract, as the case may be, by a fair and reasonable valuation.

SIXTH.—Should the Contractor, at any time during the progress of the said works, refuse or neglect to supply a sufficiency of materials or of workmen, or cause any unreasonable neglect or suspension of work, or fail or refuse to comply with any of the articles of agreement, the Owner or his agent shall have the right and power to enter upon and take possession of the premises, and provide materials and workmen sufficient to finish the said works, after giving a three days' notice in writing, directed and delivered personally to the part of the second part; and the expense of finishing the various works shall be deducted from the amount of the Contract.

SEVENTH.—Should any dispute arise respecting the true construction or meaning of the Drawings or Specifications, the same shall be decided by the Architect, and his decision shall be final and conclusive; but should any dispute arise respecting the true value of any extra work, or of works omitted, the same shall be valued by two competent persons—one employed by the Owner, and the other by the Contractor—and those two shall have power to name an umpire, whose decision shall be binding on all parties.

EIGHTH.—No work shall be considered as extra, unless a separate estimate, in writing, for the same, shall have been submitted by the Contractor to the Architect or the Owner, and his signature obtained thereto.

NINTH.—The Owner will not in any manner, be answerable or accountable for any loss or damage that shall or may happen to the said works, or any part or parts thereof respectively, or for any of the materials or other things used and employed in finishing and completing the said works (loss or damage by fire excepted.)

TENTH.—Should the Contractor fail to finish the work at or before the time agreed upon, he shall pay to the *part* of the first part the sum of..... dollars per diem for each and every day thereafter the said work shall remain unfinished, as and for liquidated damages.

In Witness whereof, the said parties to these presents have hereunto set their hands and seals, the day and year above written.

THE

SCHEDULE OF FEES

In common use among the Architects of the United States.

For full Professional Services (including supervision) 5 per cent. on the whole cost of the works.

Partial Services as follows:—

For making detail and general drawings, and specifications, 3½ per cent.

For making general drawings only, 2½ per cent.

For making preliminary studies only, 1 per cent.

For works costing $5,000, or less, 4½ per cent. for drawings; and 3 per cent. additional for supervision.

For warehouse and storage buildings, 3 per cent.

For Decorative Work, Monuments, Furniture, etc., 10 per cent. and upwards.

For alterations of buildings an additional charge is made for survey, adaptation and measurements.

For altering drawings and specifications, after they have been perfected, an additional charge is made in proportion to time employed.

For selecting or purchasing furniture, pictures, carpets, &c., a percentage to be agreed upon.

Time spent in visiting parties out of town at their request, will be charged for, whether a commission is finally given or not.

If the client is already in possession of a portion of his building material, it is fair and proper that the architect's fee should be computed upon its value.

Necessary traveling expenses are paid by the client.

Fees are successively due as work is completed in the order of the above classification.

Until estimates are received, charges are based on the proposed cost, and payments are received as instalments of the entire fee, which is based on the actual cost.

Drawings, as Instruments of Service, are the property of the Architect.

Glossary of Terms.

A.

Abattoir.—A building appropriated to the slaughtering of animals.

Aisle.—One of the longitudinal divisions of a church, commonly called a wing. The Nave, however, is also an aisle.

Architect (arc-e-tekt).—A person competent to design and supervise the erection of any building.

Architecture (arc-e-tekture).—Design.

Alkorane.—A tall slender tower, attached to a mosque, and surrounded with balconies, in which the priests recite aloud prayers from the Koran, and announce the hours of devotion to worshipers.

Their purpose is also artistical, as from their height they add great picturesque effect to the bulky and broader mass of the mosque itself.

B.

Bat.—In brick-work, a broken brick.

Banister.—A vulgar term for Baluster.—*Gwilt.*

Butt-hinge.—A hinge which when extended forms a square.

C.

Calk.—To render seams water tight.

Campanile (campa-nee-lee).—A slender bell-tower or watch-tower,—more particularly applied to Italian architecture.

Coamings.—Raised borders around the edges of hatches.

Caryatides (carry-at-i-dees). — Figures used in the room of columns in debased architecture.

Carpenter.—A worker in timber.

Clerk-of-the-works.—A superintendent of building who is constantly present at the work. He is subject to the architect, through whom he draws his salary from the owner. Blank schedules filled out by the clerk and submitted to the architect daily, give a thorough knowledge of everything transpiring at the building.

Coping.—Capping.

Coal-Shoot.—A channel under ground, built on an inclination to slide coal into a cellar.

Chute used in this connection, is questionable English.

Committee-on-Architecture.—A committee of two, separate and distinct from a building committee.

Building-committees, as a rule, are apt to mutilate design while a committee on architecture is in position to *uphold* the good.

Cement-Mortar.—In New York City, mortar made of cement;—in New England mortar made of lime and cement of about equal parts.

This is a fair example of the difference of meaning in various sections of the country of the same word.

There are very many such cases, and the confusion resulting from such a condition of things is apparent.

Estimates made upon a certain set of drawings, we will say, by an Ohio contractor, might vary materially from those given by a New York or Rhode Island party;—and again, an architect specifying certain things in building, or a particular method, or tool, for the finish of stone work, may come to find his building executed entirely different from what he had contemplated.

The way out of the whole difficulty would seem to be for the general Government to be petitioned for the appointment of a central commission with power to adjust all differences.

The commission, by putting itself in communication with the leading architects of all principal cities, and by taking time for deliberation, could reduce the architectural vocabulary of the whole country to a common standard.

D.

Detail Drawings.—Full size drawings of any portion of work ; erroneously called working drawings.

Distemper.—In wall painting, a preparation of opaque color ground up with size and water.

E.

Elevation.—A geometrical drawing of a side of a building.

F.

Flashing.—Pieces of metal let into brick or stone joints for the prevention of leak.

French Roof.—A vulgar, low-toned style of roofing extensively used in the United States for short time, but which for a few years has been rapidly passing out of date.

G.

General Drawings.—Scale drawings ; usually to an eighth or quarter of an inch.

Grouting.—Liquid mortar, usually made of cement, poured into the joints of brick or stone work, thereby unifying and solidifying the whole mass.

H.

Housing.—A channel taken out of a solid for the inserting of the extremity of another for the purpose of joining them.

J.

Joiner.—The artisan who joins wood by glue, nails or framing, for the *finishing* of a building.

Joist.—The timbers to which floor boards or ceiling lath are nailed,

Beam used in this connection is incorrect.

K.

Kerf.—The way made by a saw through a piece of wood, by displacing the wood with the teeth of the saw.

N.

Nineteenth-Century-Gothic. — Ruskinian Gothic, Victorian Gothic, Advanced Gothic, Mediæval Gothic adapted to Nineteenth Century wants and ideas.

A Nineteenth Century Gothic is fairly developed and with the Mediæval, whose principles are the same, is the highest development of architecture the world has produced.

O.

Obelisk.—A lofty pillar of a rectangular form, diminishing regularly towards the top. The top finishes with a low pyramid called a *pyramidon*—Egypt abounded with obelisks ; they were always *monoliths*, i. e., single stones. The obelisk represents crude art—and consequently is not a fit form of monument for an enlightened age.

The one lately set up in New York stands on the east side of Central Park, near Fifth avenue, on an exact line with the north side of Eighty-first street. Its chronology is given by the *N. Y. Herald* as follows :

" Thotmes III. erected the obelisk at the entrance to the Temple of the Sun, in Heliopolis, more than three thousand five hundred years ago. Two centuries later Rameses II. employed the reporters of his times to carve his greatness on the stone, and twenty-three years before Christ Augustus Cæsar moved it to Alexandria and set it up at the

Cæsarium, a palace that has gone to ruin, and in our times is merely one of the walls of a marble yard. In that yard, near the station of the railroad to Cairo, Mr. W. H. Hurlbert found it when the Suez Canal was opened. He persuaded the Khedive of Egypt to present it to the city of New York, through the government of the United States, and a contract was nearly perfected with John Dixon, who had transported the mate of this obelisk to London, to bring it to New York for $75,000, but the negotiations fell through, and Lieutenant Commander Gorringe, then commanding the Gettysburg, having taken careful observations in the Mediterranean, expressed his willingness to do the work. Thereupon the Secretary of the Navy assigned him to the State Department. Secretary Evarts permitted him to take the contract, and detailed him to go to Egypt. The cost of transferring the stone from hemisphere to hemisphere has been much in excess of $75,000. The commander shipped the trunnions on which the obelisk when raised in the Park swung, from Trenton, N. J., to Egypt, and took the stone down. He sailed with it for New York on the 12th of last June, and arrived on the 20th of July, the length of the passage being due to a broken shaft. His steamer, the Dessoug, was drawn up on the Marine Railway on Staten Island, and the obelisk was run out of her forecastle and placed on pontoons, which were towed up New York Harbor on the afternoon of the 16th of September last. The stone was carried across the Hudson River Railroad track at Ninety-sixth street without stopping a train. It was at a perpendicular over its pedestal on the ninety-eighth day after its landing on Manhattan Island."

The obelisk was placed in position on January 22d, 1881.

OPEN VALLEY.—A roof valley where the slates or shingles lie removed from the valley angle;—this in contradistinction to a *close valley* where the slates or shingles of the two roof planes meet and touch at the valley angle, with the flashing so interwoven as to prevent leak.

P.

PERSPECTIVE-DRAWING.—A drawing of a building, showing two sides of it; or, as it would appear in nature.

The terms *Elevation* and *Perspective* are sometimes used promiscuously outside the Profession.

PLAN.—A drawing of a horizontal section of a building.

A Design is not a Plan.

PUGGING MORTAR.—Coarse mortar.

Q.

QUEEN-ANNE-STYLE.—The term has no correct signification as used. The architecture of Queen Anne's time was a sort of refined Rennaissance not worth perpetuating. What has developed at the present day under the name of Queen Anne architecture is a mixture of Advanced Gothic and English Rennaissance, the Gothic largely predominating. But as oil and water will not mix, so two styles in direct opposition, united to each other, cannot produce harmony, which is one of the essential requisites of any correct specimen of art. The style, however, as handled by some, is developing an individuality of its own, which in time may eliminate discord.

R.

REREDOS (rear-dos.)—An altar screen just behind, and in later years touching, the altar.

S.

SANCTUARY.—That part of a consecrated building which lies within the chancel railing.

SCRIBE.—To scribe one piece of wood to another is to cut and pare the edge or surface of one so as to make it touch and fit (or scribe up to) the other.

SHOAR.—A temporary prop of timber placed obliquely against a building during repairs and after accidents.

SUPERINTENDENCE.—Continual personal attendance at a building with care for and direction of its construction.

SUPERVISION.—A care for and control of building through a visual knowledge of the same.

T.

TERRA COTTA.—Baked or burned earth; which was used at a very early period for the decoration of buildings.

TREE-NAIL.—A wooden pin or nail.

TRUNCATED.—Cut off.

THE EASTLAKE STYLE.—A manner of architecture consequent upon the writing of two excellent works called respectively "The History of the Gothic Revival," and "Hints on Household Taste," by Charles L. Eastlake, of England.

The principles advocated are mostly Advanced Gothic, and the style of architecture that has followed is also of that character.

W.

WITHS.—Partitions between flues.

WORKMANLIKE.—As a skillful workman would do.

It is thought by some that this word has no binding force, as used in specifications, but the Courts decide otherwise.

Conclusion.

"THE Frenehman who expressed his opinion that London had eeased to be a town,and was beeoming a vast provinee, uttered no mere hyperbole. Between the years 1800 and 1860 this metropolis not only doubled, but trebled the size which it had assumed at the close of the last eentury. At the present time, including the suburbs, it oeeupies a superfieial area of 130 square miles. On an average, about 1,000 houses are added to it every year; and so rapidly does building go on in every direction, that no one need be surprised to find the meadow-land which he walked on in spring laid out in populous streets by Christmas." —*English Author.*

"THE earth's surface contains about fifty millions of square miles."

"OBSERVE,then,first—the only essential distinction between Decorative and other art is the being fitted for a fixed place , and in that plaee related,either in subordination or command, to the effect of other pieces of art. And all the greatest art the world has produeed is thus fitted for a place, and subordinated to a purpose. There is no existing highest-order art but is decorative. The best sculpture yet produced has been the deeoration of a temple front—the best painting, the deeoration of a room. Raphael's best doing is merely the wall eoloring of a suite of apartments in the Vatiean, and his eartoons were made for tapestries. Miehael Angelo's is a eeiling in the Pope's private ehapel ; while Titian and Veronese threw out their noblest thoughts, not even on the inside, but on the outside of the eommon brick and plaster walls of Venice."—*Ruskin.*

"IT is said the highest waves of the sea are but about 22 feet in height."

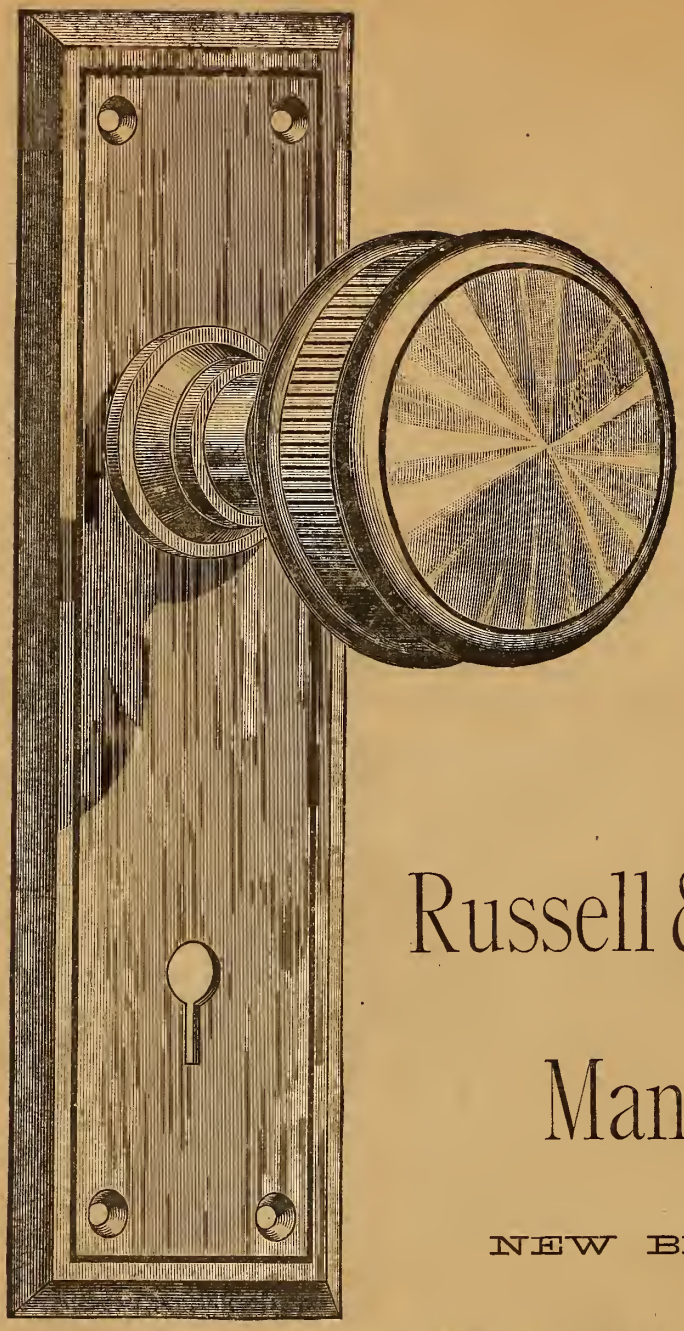
"THE common Trumpet Creeper all of you know by heart. It is rather a wild and rambling fellow in its habits; but nothing is better to cover old outside ehimneys, stone buildings, and rude walls and fences. The sort with large eup-shaped flowers is a most showy and magnificent climber in the Middle States, where the winters are moderate, absolutely glowing in July with its thousands of rich orange-red blossoms, like clusters of bright goblets."

"THE latest estimate of the population of the world is about 1,200,000,000."

"MANY people suppose that Gothie architeeture means ecclesiastical architeeture, simply because the best examples of that style are to be found in old churches and the like. But though in the middle ages there was but one sort of arehitecture at a time, no one ever thought of giving an ordinary domestic house the appearance of a ehurch, or of allowing a church to appear like anything but what it was. Each structure at onee proelaimed its object—not by a difference of style, but by a eertain fitness of arrangement whieh it was impossible to mistake. We fall into the double error of adopting endless varieties of style at one time, and yet allowing buildings raised for totally different purposes to resemble eaeh other in form."—*Eastlake.*

WE will write *finis* with the following *tid-bit* from *Haswell :*

"Weight of Men and Women.—The average weight of 20,oco men and women weighed at Boston in 1864 was:—Men, 141½ pounds; Women, 124½ pounds."



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