

FROM THE AMERICAN ARCHITECT AND BUILDING NEWS.

SPECIFICATION OF PLUMBING WORK AND MATERIAL.

As shown on plans, furnish and set one $\frac{2}{3}$ double acting lift and force pump to draw water from well and cistern. Connect pump with these by $\frac{1}{2}$ inch lead pipe weighing 3 lbs. per foot, said pipe to be run four feet below the surface of the ground, outside of house and down to a point one foot from bottom of well and cistern, and to have $\frac{1}{2}$ -inch round way stop cock placed on each pipe so that water can be pumped from either by closing the stop cock on the line not needed. Carry a branch of $\frac{3}{4}$ inch lead pipe, weighing 2 lbs. 3 ounces per foot, from a point just below the retaining valve of pump to cold water cock over kitchen sink. Connect to pump and continue up to and over top of tank in attic a $\frac{1}{2}$ -inch lead pipe, to weigh 3 lbs. per foot.

As a tell-tale or alarm pipe, carry down from tank, four inches from top of same, a line of $\frac{1}{2}$ -inch lead pipe, to weigh $\frac{1}{2}$ lbs. per foot, to wash-tubs in basement. (If roof water runs into tank, this tell-tale pipe may be omitted.)

(In that case, say, connect gutter to a point 4 inches from top of tank with $\frac{1}{2}$ -inch lead pipe, to weigh 10 lbs. per foot, and to run to within 6 inches of bottom of tank. Put a proper brass wire strainer over end of said pipe at gutter.)

Connect a 6-inch lead pipe, to weigh 12 lbs. per foot, a few inches (say 6) from top of tank, and run to outside of building, and connect to leader or run into some gutter or roof lower than where the tank stands. At outlet end of this pipe place a brass flap valve to keep out cold.

Line a tank (tank to be furnished by owner) with 5 pound sheet lead; wipe the seams and dot the sides, leaving the lead smooth all around; dots to be $\frac{2}{3}$ inches in diameter and 2 feet from centres; (tinned copper nails only to be used.) Connect tank with soil pipe by a $\frac{1}{2}$ -inch lead pipe, weighing 3 lbs. 11 oz per foot, placing on said pipe, as near tank as practicable, a $\frac{1}{2}$ open way valve [state kind preferred] for the purpose of emptying tank.

Run a $\frac{3}{4}$ -inch lead pipe, weighing 3 lbs. per foot, down from tank to boiler in kitchen. From this pipe take out the necessary branches to supply the different fixtures with cold water, except sink in kitchen; place a $\frac{3}{4}$ -inch rough lever handle stop cock on said pipe under tank, to shut off water from house at pleasure.

Connect with 6-inch vitrified drain pipe just outside cellar wall a 6-inch cast iron pipe, and continue same with proper ascent to the point where the $\frac{3}{4}$ bend receives the main soil pipe, which is to be 5 inches and continued up, full size, through and three feet above roof, and properly secured, and to be surmounted with a hood or ventilating cap.

As shown on plan, carry from main soil-pipe a 3-inch branch up to and through the roof, secured to same and surmounted with hood as hereinbefore described; this pipe to receive wastes from basins and baths.

Furnish and set complete one range with waterback [here state the kind].

Furnish and set one 40-gallon copper boiler, Brooklyn pressure, dome head, and set the same on a Lockwood pattern boiler stand, supplied with water through $\frac{3}{4}$ -inch lead pipe, weighing $3\frac{1}{2}$ lbs. per foot, to be connected to range with same kind of pipe; said boiler to have the necessary $\frac{3}{4}$ -inch sediment pipe and stop cock. Said sediment pipe to be connected into waste from laundry sink, so as to empty and cleanse boiler at pleasure; also place $\frac{3}{4}$ -inch stop cock on supply pipe.

Furnish and fit up the plumbing of three wash trays as per plans, and supply each with hot and

WASH TRAYS. cold water through $\frac{3}{4}$ AA lead pipe, to weigh $2\frac{1}{2}$ lbs. per foot; and two $\frac{3}{4}$ -inch flange and thimble bibb cocks [state here the kind], $\frac{1}{2}$ inch brass plugs and chains, and the necessary length of 2-inch lead waste pipe, to be trapped with a 2-inch [state kind, if any special one] $\frac{1}{2}$ S lead trap and trap screw—said 2-inch trap to be connected to main drain by 3-inch lead waste pipe as shown.

Furnish and fit up one cast-iron sink, size indicated on plan, and to have cast-iron back and legs [if any special kind of sink, state it here], to be supplied with hot and cold water through $\frac{3}{4}$ -inch AA lead pipe, to weigh $2\frac{1}{2}$ lbs. per foot; and two $\frac{3}{4}$ -inch flange and thimble bibb cocks [state kind of bibbs here], one to have hose screw for filter; to waste through $\frac{1}{2}$ -inch lead trap and trap screw [if any special kind of trap, state it]; to be connected into 2-inch cast-iron pipe at a point just below the ceiling in cellar with a 2-inch brass ferrule, and from that point to the grease-trap outside of house it is to be 3-inch cast-iron.

As marked on plans, furnish and fit up one copper butler's sink (size 20x14), and set the same in a best Italian marble slab, PANTRY SINK, with counter-sunk face, molded edges, and base 12 inches high, supplied with hot and cold water through $\frac{3}{4}$ -inch AA lead pipe, to weigh 2 lbs. per foot, and two upright pantry cocks [here state kind of pantry cocks and kind of plating], and to waste through $\frac{1}{2}$ -inch waste-pipe, to weigh $3\frac{1}{2}$ lbs. per foot, and be trapped with a $\frac{1}{2}$ -inch lead trap and trap screw [if any special trap is preferred, state it here], connected with the 2-inch cast-iron pipe, with 2-inch brass ferrule, and branch into 3-inch pipe under kitchen sink.

As on plans, furnish and fit up one 14-oz. stamped and guaranteed copper bath [if any special make preferred, state it], and supply same with hot and cold water through $\frac{3}{4}$ -inch AA lead pipe, to weigh $2\frac{1}{2}$ lbs. per foot, and two $\frac{3}{4}$ plated flange bibb cocks [state kind of bibbs and kind of plating], to be emptied through $\frac{1}{2}$ -inch waste, with plated plug, with chain and the necessary $\frac{1}{2}$ -inch 3 lb. lead waste-pipe, $\frac{1}{2}$ -inch heavy lead trap and trap screw, and connected into Y branch of 3-inch iron pipe by 2-inch brass ferrule and 2-inch cast-iron pipe.

As per plans, furnish and fit up 14-inch marble pattern, common overflow wash basins, each to be set in a best Italian marble slab, WASH BASINS, counter-sunk face, molded edges, back and sides $\frac{3}{4}$ -inch thick, 12 inches high, and two plated basin cocks [state what kind and what kind of plating], plated plug, chain and chain stay, and be supplied with hot and cold water through $\frac{3}{4}$ -inch AA lead pipe, to weigh 2 lbs. per foot, and the necessary length of $\frac{1}{2}$ -inch D waste-pipe, to weigh 3 lbs. per foot, $\frac{1}{2}$ -inch lead trap and trap screw, [if any special trap, say what kind], and 2-inch brass ferrule to connect waste-pipe into Y branch of 2-inch iron pipe. There must be a line of $\frac{1}{2}$ -inch lead pipe run from back of the two traps under basins, second floor, and continue up to a convenient point above, when they will be connected into the 3-inch cast-iron pipe, as indicated by dotted lines. There will also be a pipe run from back of trap of bath and water-closet on second story and connected into the 5-inch soil pipe two feet above these fixtures in same manner.

All lead connections with iron pipe to be by brass ferrules, which must be soldered to the lead waste-pipes, and be caulked with oakum into the iron hub, and the joints run with molten lead.

All the lead pipes must be secured to walls by hard metal tacks and screws, and not by hooks. There must be safes placed under basins, bath and water-closet on second story and tank in attic, the size of spaces occupied, and to be turned up two inches all around, made of 3 lb. sheet lead; have a separate 1-inch lead waste-pipe with $\frac{1}{2}$ -inch convex strainer to run to cellar

direct from each safe, leaving the end open, and not to be connected to anything in cellar.

There must be a line of $\frac{3}{4}$ -inch AA lead pipe run from boiler direct to bath-room for hot water, to weigh $3\frac{1}{2}$ lbs. per foot, and to have stop and waste cock placed on it so as to shut off hot water from the upper part of the house when necessary. There must be a $\frac{3}{4}$ -inch AA lead pipe, to weigh 2 lbs. per foot, connected to the $\frac{3}{4}$ -inch lead pipe in bath-room, and to run down to below boiler, and which must be connected to sediment pipe inside of sediment cock for the purpose of keeping up a continued circulation of hot water. Care must be taken in putting in this, as well as the hot water line from top of boiler to bath-room, so as to insure a free circulation, and it can only be done by not allowing any depression to be made in the pipes after leaving the boiler—that is, they must be kept rising from the head of boiler to bath-room.

Run a line of $\frac{3}{4}$ -inch AA lead pipe, to weigh 2 lbs. per foot, from the top of $\frac{3}{4}$ -inch hot water supply in bath-room, up to and over top of tank in attic, leaving the end open for steam escape, and to prevent collapse of boiler.

Furnish and fit up, as shown on plan, a water closet [here state what kind of water closet, if pat. valve closet, whose if cistern closet, what make?]

if cistern is to be any special one, state whose; if to be made by the plumber, give the size, weight of lead it is to be lined with—size, and weight of lead in the service box—size of cistern valve, and what kind of ball cock; if closet selected requires trap, say so.

to have 4-inch heavy lead trap, to be connected to the Y branch of soil pipe by the necessary 5-inch 6 lb. lead waste-pipe and brass ferrule. (If closet called for requires separate bowl, state French water-closet bowl for valve closet, and oval bowl with fan and screws, if cistern closet is used,) supply pipe to cistern to be $\frac{3}{4}$ -inch AA lead pipe, weighing 2 lbs. per foot; and $\frac{3}{4}$ AA, weighing $2\frac{1}{2}$ lbs. to foot, if to supply a valve closet.

Chain for wash trays to be No. 2 Safety Brass Chain; for bath, No. 1 Plated Safety Chain; for basin, No. 0 Plated Safety Chain.

The contractor to plug up all openings in waste or iron vent pipes, and fill the same with water from highest point of said pipes. If any leak is shown, the defective joint to be made tight—in other words, to satisfactorily demonstrate the waste pipes are gas and water tight; this to be done before scratch coat is put on the walls.

Over-flow pipes from basins and bath to be branched into dip of traps of same. All soldered joints to be wiped joints, except at couplings of basin cocks, which may be cupped joints. Leave out all necessary Y branches for work, as marked on plans. Cast-iron pipes to have a coat of coal tar inside, and all work to be done in workmanlike manner. Where this specification varies or conflicts with the drawings, the contractor to be governed by the specification.

(If basins are to be supplied with any special faucet, or emptied by any special appliance, state what kind is wanted); the same applies to bath tub.

When faucets are to be plated, state whether nickel or sil. or plated, and if "silver plated," whose silver plate is required, now that there are so many new appliances in plumbing materials, it is absolutely necessary to state explicitly just what is wanted, otherwise the contractor is justified in using whatever he can buy for the least money.

NOTES.

Plumber must never be allowed to place any water or waste pipe on an outside wall of a country house, on account of cold, they snow. The run in or on the surface of partitions.

In all cases, the waste pipe, which the trap empties must be of larger area than the trap and from the point of its junction (this refers to lead traps under fixtures). The architect can judge from the character of trimmings and interior finish of the house how elaborate the fixtures should be, in order to be in keeping with the surroundings.