

Thoughts on Furnace Management

By C. M. Nelson.

FURNACE management consists very largely in knowing something about the furnace you are trying to use. A large percentage of the trouble in operating a furnace is in not knowing whether your furnace was originally made to burn wood, soft coal or hard coal. If in doubt telephone to someone who is expected to know, giving the number, date, name and maker of your furnace, and start out right, with the proper fuel adapted to your furnace.

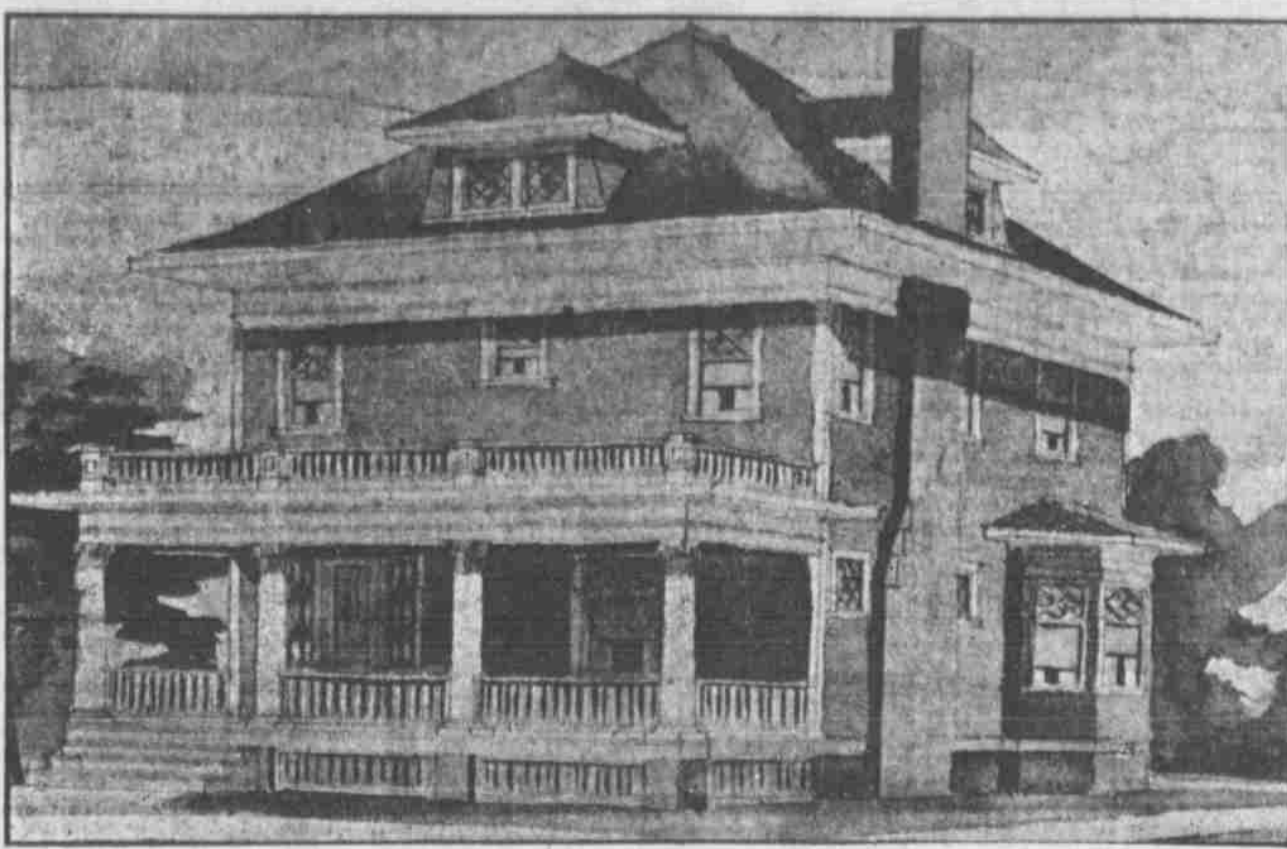
A furnace to work satisfactorily must be kept clean. In burning any kind of fuel the following suggestions will be valuable. Never open the feed door until you are sure the back check damper is closed and if a direct draft damper is used see that it is open or upright and be sure that the ash pit door is closed. When you open the feed door do not open it with a quick jerk; if you do the accumulation of gas or smoke in front of the feed door will by suction be drawn out into the cellar and you may in a few moments hear a gentle call from upstairs asking what you are doing. To avoid this open the feed door an inch or so, allowing the current of air or draft to carry off the products of combustion to the rear of the furnace and up the chimney. Care should be used in putting in fresh coal. In filling up the fire chamber put fresh coal in front and gradually fill it up to back. If soft coal is used fill it up only from center and keep fresh fire burning around the outside of firebox. This is done so as to smother your fire. I always put fresh coal in a furnace before shaking or touching the grate, especially when using hard coal. If coal is put on first and then you shake your grate the whole mass settles down together and makes a better fire and kindles much more quickly. Hard coal must not be disturbed by putting a poker in through the feed door and punching or otherwise disturbing the fire. If cinders have to be removed do it as carefully as possible. Almost everyone shakes their grates too much, thus wasting a large amount of fuel which is shaken down through in the form of red hot coals. Always take up your ashes before shaking or touching your grates. Much of the disagreeable odor through your house can be avoided by following this simple rule. The ashes shaken down this morning are cold and odorless if taken out tomorrow morning. The fresh ashes shaken down are hot, full of fire and emit for several hours a very disagreeable odor, which goes all over your house.

Every cellar should have ventilation from two sides, so that the cellar will always be sweet and clean. In the spring take down your smoke pipe, clean it out and leave it down all summer. If it is left up clean out your furnace, put a piece of unslacked lime as large as your head on the grate, leave the ash pit door, feed door and back check open. The lime will absorb moisture and help keep the cellar air pure.

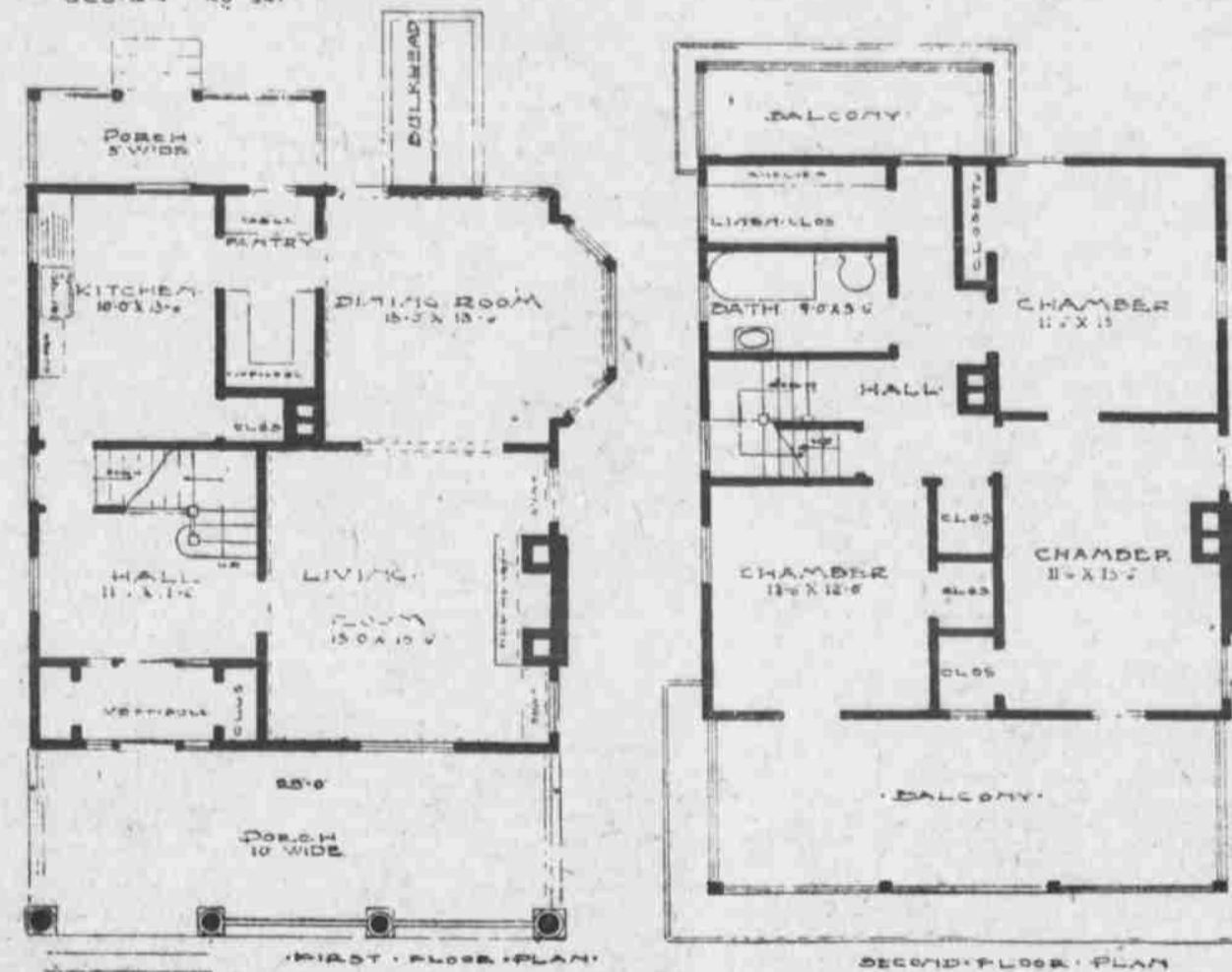
Most furnaces are now made with a very large check draft in the rear. This must be used with great care. If fresh coal is put in the furnace, either soft or hard, and the check draft is opened full width you are carrying into the smoke pipe all the air the pipe can carry off, and as the furnace is manufacturing smoke and gas there is no way for it to be carried off and the result is that it is forced out into the cellar and forced out through cemented joints, and you wonder what the trouble is with your furnace. The trouble is with you and not your furnace.

It is surprising how many people take their trouble to their coal dealer and blame him for all the gas, smoke and soot that gets up into the rooms. Why not take your trouble to your furnace man, if you have done everything that can be done and your furnace still gives you trouble. Over half of the complaints made can be traced almost directly to the misuse of the furnace.

NEWS OF THE BUSY HOME BUILDERS



ARTHUR C. CLAUSEN ARCHITECT MINNEAPOLIS DESIGN NO. 34



Home-Building Odds and Ends

Arthur C. Clausen, Architect.

THE entire designing and building of a house might be treated under the general head of "Odds and Ends," for the house is made up of many details. Each must be considered separately and then collectively to obtain a durable structure and harmonious results. A few points not considered in previous articles will be taken up here.

To cover fully the printed designs and plans for sideboards would require an endless article. It is seldom that one sees two sideboards just alike. There are probably more outlandish designs made for this fixture than for any other part of the house. For this reason many people prefer to omit this feature in the construction of the house, merely providing for a recess into which a movable sideboard can be placed. In each should be provided many drawers for knives, forks, napkins, etc., and a cupboard with shelves for tablecloths and dollies. Above shelves for cut glass and decorated china. A row of small cupboards at the top, the middle portion being brought out into a bay is a good arrangement; the doors of these little cupboards should have small square coppered glass lights.

Placing columns in interior doorways as a decorative feature is commendable under appropriate circumstances. The columns should always be in exact proportion regardless of the height. They can be of any order of architecture, but are usually Ionic, Corinthian, composite or of Italian renaissance. The caps are either hand carved wood or composition, a durable material moulded in imitation of wood carving that can be bought at a low price. An elliptical opening is graceful if made right. In making an elliptical arch the "string method" should always be insisted upon, as it is the only practical one and will bring good results.

A neat finish for kitchen or bathroom is obtained by using cement plaster on wire or metal lath marked off and enameled in imitation of tile. A closet dresser built in at one or both ends of the closet can be made any number of drawers high as desired, there should be at least two compartments for hats, one or two small drawers for gloves, neckties and other small articles, and a small drawer at the bottom for shoes, shoe blacking, etc., those above (any number of them) should be the full width of the dresser for skirts, trousers, etc. It is not best to make these last named drawers too deep. The best finish for the interior of a closet is to make the side walls of cedar flooring. They are then varnished and you can put hooks and shelves in them anywhere without breaking the plastering. Cedar closets should never be painted or varnished. More or less dust and soot always gathers on a sill and when it rains it will streak down the side of the house if it is not dripped off in some manner. When the sills are of stone be sure that a groove is cut under the overhanging edge to drip off the rain.

The best method of making a frame house cool in summer and warm in winter is as follows: On the inside of the studing is the ordinary hard plastering on wood lath, on the outside put one thickness of pine sheathing, then stringed tar felt paper (for wind and vermin), another thickness of sheathing, then rosin paper and lap siding or shingles. All boards nailed close and four-inch laps for paper. The cost of the paper is too small to consider, and the extra layer of sheathing

THE BEE'S PLAN BOOK

Through an arrangement with Arthur C. Clausen, architect, the readers of The Omaha Bee can obtain a copy of his beautiful book, "THE ART, SCIENCE AND REVOLUTION OF HOME-BUILDING," for One Dollar.

This book contains forty-six chapters and 200 illustrations, printed on heavy enameled paper, with cover stamped in gold. It deals with the practical side of homebuilding, giving complete information on the planning and designing of every kind of home. There is nothing more practical than making the home artistic, building it on scientific lines and to insure sanitary conditions and warmth. The author of the book aims to give the intending home-builder advice on subjects such as buying the lot, planning the home, letting the contract, choosing the materials, etc. Problems about front doors, windows, stairways, fireplaces, exterior, interior finish, etc., are treated in detail and treated with good common sense. Nearly all questions that could be anticipated are answered and the book should prove a great help to those who are about to plan a home. It is profusely illustrated. Send all orders to Arthur C. Clausen, 126-78 Lumber Exchange, Minneapolis.

will pay for itself in a short time by a saving of fuel. This method is far better than back plastering.

The basement sill inside should slant down instead of being carried out flat. The latter method is a dirt catcher and cuts off considerable light. There should be a cellar under the entire house, as it costs but little more than a smaller one, the space can always be used, and it makes a house dryer and warmer when there is a heating plant. The cellar should be from seven (never less) to eight feet high, and it is best to plaster the ceiling with hard plaster on wire or metal lath, thus making a fairly good fire stop. The side walls should be whitewashed with two coats of cement (one part cement, two parts sand) on top. Cellar walls, whether of stone or brick, should have a inch of cement on the outside to keep out moisture. Cellar walls should not be less than twelve inches thick of good, hard brick, or concrete, and eighteen inches if of rubble stone. Each thickness should be increased four inches if the house above is of brick or brick veneer. Cellar walls of stone or brick should always be laid in cement mortar, never lime. Each pair of floor joist should be "cross-braced" every five or six feet in their length. Put double joist under all partitions running in the same direction as joist.

Cedar or cypress shingles for side walls and roof are best. A substitute being fir shingles never the basswood shingles. Cedar shingles, if allowed to weather, become a pleasing gray. If it is desired to stain them use a creosote stain. It is best to dip the shingles in the stain and place on the roof when dry. Matched boards or ship lap make a better and warmer job than plain boards. Horizontal sheathing is as good as diagonal and is cheaper. Georgia pine makes a good floor. Maple or birch is more expensive, but better. An oak floor, because of its open grain, is

harder to keep in good condition than maple. All flooring should be "blind nailed;" that is, the nails should be driven into the tongue of each strip as it is laid. Flooring should be absolutely dry, kiln dried, before laying, and then finished as soon as possible. The kitchen floor should be finished in oil, so that it can be scrubbed often. A felt deadening is advisable between the under and top flooring of the second floor. A wide porch costs a little more than a narrow one, eight to twelve feet wide is about right for the average house. Sap lumber should never be allowed for the porch floor. Instead of matched boards for porch floor a good way is to use narrow strips and lay them about an eighth of an inch apart. This will prevent warping and an uneven floor. The porch floor should have about a two-inch slant from the house to the outside edge. Porch steps should be one and a quarter inch thick. Make all outside door sills of white oak. If there is no stairway to attic, provide a scuttle to it. A scuttle being a good place for it. Some cities require this precaution to make easy access for firemen if ever needed. If the rafters of a roof are plastered with brown, rough plastering, your attic will be warmer in winter and cooler in summer. Provide a dormer or window in gables for light and ventilation to attic. Chimneys should be built from the ground up (some cities require this). A terra cotta or burnt clay flue lining is the best. Floor joist should not rest in chimney walls, but on headers outside of them. Metal lath is more expensive than wood, but serves admirably as a guard against the passage of fire; it also prevents the passage of rats, mice, etc. Have plenty of windows and use them. Sunlight and air (winter and summer) is the best preventive, as well as cure for consumption and pulmonary troubles. Have a uniformity of height for your doors and windows.

Don't forget to put storm sash, window screens and screen doors in your building contract. Patent sliding screens on the lower half of windows are the best; they can be easily placed and removed and the windows can always be washed. Shutters or "blinds" always look well on colonial houses and have several advantages. Small windows in closets where they do not interfere with the exterior design of the house are of an advantage. A ventilating flue in the kitchen chimney is a splendid thing and costs little. It is almost a necessity in a sanitary home. A tile floor for bath room is best. If a wood floor is used have water-proof paper placed under the top flooring. Popelatin or enamel iron tubs are a necessity for a well ordered bath room. All bath rooms should have windows and also ventilation. Use open plumbing only. A water closet separate from the bath room is convenient, but it should be adjoining the latter, having however, a separate entrance and an outside window. It is cheaper to have your plumbing in a perpendicular line. Laundry tubs in cellar. Kitchen sink directly over them and bath room over that. Don't forget a good sized linen closet with an outside window.

A hot water heating plant is best, steam heat and then furnace. Hot water cost the most and hot air the least. There should be fresh air ventilation in several parts of the house. A good heating man will describe in detail to you the advantages of "indirect radiation." The hardware of a house is a small item of cost and should not be in the contractor's con-

tract except that he should put it on. This leaves you free to select hardware, as locks for doors and windows, sash lifts, hinges, etc., as suits your taste. Don't place gas fixtures behind doors or close to windows near the curtains. Do not arrange doors and windows so that wall space can not be found for necessary furniture, as beds, dressers, sideboards, etc. Study the swing of your doors so that they will not swing onto stationary furniture. Don't swing the doors into the closet, swing them outward. Leave room for a bedroom dresser near a window, but not opposite. Place your radiators or registers near windows (under them is best), where they will heat the cold air as it enters the room. Never place a radiator near the head of your bed or on wall space available for necessary wall furniture. A small light in pantry door is a good thing.

In conclusion it may be stated that it is best to let the contractor for your entire house (except heating and plumbing) to one general contractor. It saves you much needless worry, and is far cheaper than "day labor," or separate contracts for various parts of the work regardless of what you may have been told to the contrary. As Mark Twain puts it, "Put all your eggs in one basket and watch that basket."

Whistling and Weeping Trees. Among the curiosities of tree life is the so-called whistling tree of Cuba. When the winds blow over this tree it gives out flute-like sounds, playing away to the wilderness for hours at a time, strange, weird melodies. It is the spirit of the dead singing among the branches, the natives say, but the scientific white man says that the sounds are due to a myriad of small holes

GARLAND

Stoves—Ranges
Gas Ranges—Heaters
80 Tons of Iron a Day
Melted to Make "GARLANDS"
"The World's Best."
For 37 years the most extensively sold.
May as well have the "GARLAND."
You pay just as much for inferior makes.
All Ranges are supplied with "GARLAND" Oven Heat Indicator.
Sold by the Best Dealers Everywhere.
Write for Illustrated Free Book.
The Michigan Stove Company
Lansing, Mich. and Branches in the World
Detroit, Mich. Chicago, Ill.

Milton Rogers & Sons Co.

Oldest and Largest Hardware and Stove Store in Omaha

Quick Meal STEEL RANGE



Wins the heart of every housewife. Hundreds in use in Omaha. Its smooth, polished body and nickel trimmings make it handsome, yet so easy to clean. Its airtight, all steel body makes it possible to fix it up in no time and use astonishingly little fuel. It has no putty joints—no stove bolts to loosen up. Its body is double cased with asbestos lining nearly half an inch thick between the steel.

With high closet up from \$38

Sole agents for Quick Meal Ranges and Radiant Home Stoves. Stoves and Ranges Sold on Payments.

WALL PAPER SALE

Tomorrow we begin our fall sale of imported Wall Paper. This is unquestionably the finest stock of paper in Omaha and we guarantee to undersell any dealer in the city. If you wish to make an early selection call at once.

2008 Farnam St.

Carey Flexible Cement Roofing

FOR TWENTY-FIVE YEARS the STANDARD ROOFING

Will Positively Resist the Elements On Flat or Steep Roofs

WE ARE REMOVING ROOFS and APPLYING CAREY'S

WHY? ALLOW US TO ANSWER

Sunderland Roofing and Supply Co.

which an insect bores in the spines of the branches. The whistling tree of the Canary Islands is another arboreal fruit. This tree in the driest weather will rain down showers from its leaves and the natives gather up the water from the pool formed at the foot of the trunk and find it pure and fresh. The tree studies the water from innumerable pores at the ends of the leaves. —Chicago Journal.

Northwestern Expanded Metal Co.

84 Van Buren St., Chicago

Manufacturers of

EXPANDED METAL

the Standard Material for

CONCRETE REINFORCEMENT

in floors, roofs, bridges, pavements, sewers, etc. Write for pamphlets containing full information.

We Make Them in Omaha and can duplicate any

Press Brick

manufactured in the world—also

Save You Money

Hydraulic-Press Brick Co.

330 Bee Building.

Let us show you samples.

"The Train of Real Lights."

The Popular Chicago Train

Leaves Omaha at 6:30 P. M.

This train is about perfect for all classes of travel.

It is brilliantly lighted by electricity generated by a dynamo in charge of the train electrician—

The standard sleepers, with berth lights, are of the latest models—

The steel library observation cars are all that could be desired for their purposes—

The sleepers and diner are ready at the Omaha station at 6:00 p. m. There are no handsomer dining cars than the new ones in operation on this train, nor is there anywhere any better dining car service—

Breakfast is served in the diner before 8:30 a. m., the time of arrival in Chicago. This enables you to go at once to your place of business, and gives you ample time for connection with all trains east.

TICKET OFFICE,
1502 FARNAM STREET.

Burlington Route