

at the wisdom of critics of books, paintings and works of art. We have read of the amusing development in New York, where a committee at the National Academy of Design awarded first prize to an individual painting which, it developed afterwards, had been hung upside down.

That is too much for our weaver, but our cerebrum turns completely over at the statement of one of the judges that he suspected that the picture was hung wrong but that it was equally good from either side!

IS WHAT SCIENCE HAS TO SAY ABOUT YOUR HOME HEATING PLANT

Principles of Correct Home Heating Are Formulated by Holland Institute of Thermology.

With winter upon us, there is nothing so essential to family well-being or so productive of satisfaction with home surroundings as a heating plant that keeps every one warm and comfortable, says the Holland Institute of Thermology, Holland, Mich. There are several rules to carry out in caring for the furnace and several points to keep in mind if improvements are contemplated, which engineers of the Institute have listed here for the home owner.

All well-built and properly installed central heating systems, of whatever kind, will produce heat; but there are four principles to be followed in selecting among them, according to the heating engineers on the Institute's staff. These guiding rules are:

1. The heating plant must supply a sufficient volume of moderately warm air to raise the temperature of the cold outside air that leaks into the house.

2. All the atmosphere in the home must be properly humidified or vaporized in order to maintain comfort and health.

3. This inside air cannot be allowed to become stagnant, but must be constantly circulated.

4. Some system of ventilation, or disposing of the foul air, must be in effect.

Define "Warm Air"

Air that is moderately warm is more comfortable and more healthful than parched over-heated air. Also, it is more economical to produce. Again, steady firing of the heating plant at a moderate rate increases its length of life. Frequent over-heating of the fire box and combustion chamber or boiler tends to burn out the grates and other essential parts of the heating plant which always necessitates expensive repairs.

So the modern vapor-air plant is designed to keep the home warm at a moderate average temperature, and the leading manufacturers in the warm-air heating industry plan heating plants which are "tailor-made" for each home to be heated. They steer a middle course between an over-size heating plant and an under-size one. Among the results are the fact that the heat prevailing in the home is remarkably even from hour to hour and from day to day and the further fact that a heating plant which is well adjusted to the size of the house will heat it up rapidly on cold mornings.

Humidity is Vital

Humidity in the home is a heating plant requirement which has had much discussion among medical authorities and heating and ventilating engineers during recent years. These experts agree that the average American dwelling is grossly over-heated and under-humidified. From 68 to 70 degrees Fahrenheit is accepted as the ideal indoor temperature for normal human beings. At that temperature, the relative humidity should range from 40 to 45 per cent for comfort and health.

To reduce this to its simplest terms, it means that, in the average six room home, in average winter conditions, about six gallons of water must be evaporated each day to keep the air comfortable. Merely setting a pan of water on a radiator is not enough to supply this large amount of moisture. Besides, water pans, whether they are set on radiators or built into heating plants, have a habit of going dry unless they are watched daily.

So it is up to the heating plant itself to supply, not only proper warmth, but also proper humidity. Not all heating plants can do this, but there is at least one type of vapor-air heating plant available which produces adequate results—and does so by means of an automatic humidifier. The device is capable of evaporating from three to more than 20 gallons of water a day, which is ample to maintain proper humidity in any house which such a plant would be called upon to heat.

Air Circulates Like Blood

But modern science has found that it isn't enough to warm air to the proper temperature and vaporize it to the proper humidity. In order to be healthful and comfortable, air has to be circulated in the home just as blood has to circulate in the veins in order to maintain life. Stagnant air is as unpleasant to live in as stagnant water is to drink.

Proper air motion throughout the home does not require an expensive system of fans, provided the heating plant is of such a character that it will continually keep the air moving. Some heating systems make no effort to do so, but just heat the air in each room time after time, almost without change, except as fresh air seeps in through cracks about doors and win-

dows and forces some of the foul air out.

Make Cigarette Smoke Test

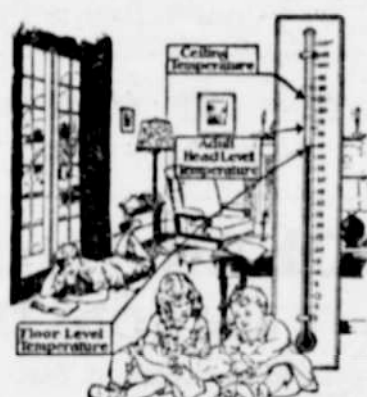
How this works is easily demonstrated by cigarette-smoke tests which can be performed in any living room. Blow smoke into the air on a level with your face. If it hangs suspended there, or only gradually falls or rises, it means that there is little air motion in the chamber, except as slightly warmer air slowly rises or slightly cooler air slowly descends.

But the University of Illinois tests have demonstrated that, on the average, the modern warm-air heating plant completely changes the air in each room on an average of twice an hour. That is the whole volume of air in each room is taken out through the ventilating ducts, passed into the central heating plant where it is heated and then passed back to the room again.

Try the smoke-test in a room heated by this method. The smoke will pass directly from your lips toward the ceiling, will curl rapidly across the upper part of the room, and then will be drawn down to the ventilating duct with the rest of the exhaust currents. There is a constant motion of the air, upward from the grille, across the upper portion of the room and then down and out through the ventilating ducts.

Increases Air Motion

While the ordinary warm-air heating plant will perform this operation one and a half times an hour, there are "super-circulating" warm-air plants in which motorized fan-units are placed to increase the rapidity with which the air is handled. Tests conducted by the department of engineering research of the University of Michigan showed that this type of heating plant



Cold Floors Are No Problem Where an Electrified Air-Propeller in the Heating Plant Uniformly Distributes Warm Air Through the House.

turns over the air in every room from four to five times an hour.

This provides the necessary circulation of air. It also supplies as much of the fourth requirement, ventilation, as is practical to introduce into the home without undue expense. Really, ventilation means taking off the foul air and completely replacing it with clean fresh air. In large public buildings, exhaust fans take the foul air away and blow it outdoors. Fresh air is sucked into the basement by other fans, then is washed and brought to the proper degree of warmth or coolness, and finally is blown up into the various rooms.

Perhaps the future holds some equipment like this for residences. At present, no such system has been devised which is inexpensive enough for the average home owner. But an efficient substitute for it is the warm-air circulating central heating plant. For each time the air is taken out of the room and passed through the central plant, it is purged by the intense heat inside the furnace of many of its impurities. When it is passed up to the living rooms again it is much cleaner than when it entered the ventilating ducts.



As Dry as the Air Over Deserts Is That in the Average American Home.

HOME POINTERS

SHREDDED NUM NUM

1 1/2 c. cooked shredded chicken
1/2 c. cooked spaghetti
1/2 c. cooked spaghetti
1 sm. green pepper shredded
1/2 red pimento
3 tbsp. butter
2 c. cream
3 egg yolks
1 tsp. salt
1/2 tsp. paprika
2 mushrooms chopped fine
Simmer slowly green pepper, mushrooms and butter in a covered dish. Add ham, chicken and paprika, and cook together 2-3 minutes. Add spaghetti, pimento, cream and salt, boiling about 4 minutes. Mix yolks of eggs with 2 tablespoons of cream and stir into the mixture. Take off fire at once.

RAREBIT MILD

1/2 to 3/4 lb. mild soft cheese
2 1/2 cups bread crumbs
1 2/3 teaspoons salt
3 eggs
1 1/2 cups milk
1/3 teaspoon paprika
Cut cheese in small pieces. In buttered baking dish sprinkle layer of bread crumbs, cover with one-third the cheese and seasonings. Repeat twice. Beat eggs slightly, add to milk, and pour over mixture. Set in a pan of hot water. Bake in moderate oven 35 minutes. Serve at once.

COFFEE DESSERT WITH Caramel Sauce

1 package coffee junket
1 pint milk
1/4 cup boiling water
3 tablespoons sugar
Prepare coffee junket according to directions on package. Put sugar in iron frying pan, and stir constantly over fire until melted to a light brown color. Add water, and boil six minutes; cool before serving over ice cold junket.

SUNFLOWER SALAD

(Serves 24)

18 oranges
3 heads lettuce
50 dates
Lemon mayonnaise
Peel oranges and remove pulp carefully from each section. Arrange lettuce on individual plates; place orange sections like petals of flower. Wash and stone dates; cut each in 4 pieces and pile in center. Serve with lemon mayonnaise.

"LEMON-NAISE" RECIPE

(Makes about 1 quart)

2 egg yolks
1 teaspoon salt
1/4 cup lemon juice
1 quart salad oil
Break the egg into a bowl. Add half of the lemon juice and mix well. Add oil, slowly at first until 1/4 cup is added; then the oil may be beaten in rapidly. When the dressing becomes thick, add the remaining lemon juice, and proceed with remainder of oil.

WINTER CORNSTARCH

2 cups milk
6 tablespoons cornstarch
1/2 cup sugar
1 1/2 squares chocolate
1/2 teaspoon vanilla
1/4 teaspoon salt
Mix dry ingredients, make into thin smooth paste with a little milk. Add to heated milk in top of double boiler. Add vanilla and pour into molds rinsed in cold water. Chill, serve with cream or whipped cream.

BEEF STEAK, SPANISH

2 lbs. round steak (or raw stewmeat)
1 medium-sized onion
1 clove garlic (small)
1/2 bell pepper
3 tbs. flour
2 cups hot water
1 can tomato sauce or stewed tomatoes
4 tbs. oil or drippings
Seasonings

Cut steak in small pieces, slice or mince onion, garlic and bell pepper. Heat oil in frying pan until very hot. Add meat, onion, garlic, and bell pepper and fry until meat is well browned. Sift flour over mixture in pan and stir well to prevent scorching. When flour is well mixed in and slightly brown, add the hot water and stir briskly. When the gravy is smooth, add the tomato sauce and stir well until blended. Season to taste with salt and pepper and a dash of cayenne or a small jar chili if desired. Cover tightly and let simmer on back of stove about one hour, adding more water if gravy becomes too thick.

POUNDS, DOZENS AND PECKS

Very often the housewife will get a better idea of the actual cost of a certain food, by figuring it in some other form. For instance, oranges at sixty cents a dozen may seem very high, but if you weigh a dozen, and find they are costing about fifteen cents a pound, they appear very low priced indeed—particularly when you consider that you are paying several times this much per pound for such foods as butter, steak and cheese.

As most of us eat too much of the acid-producing foods like meat, fish, bread and eggs, and not enough of the alkaline foods like meat, fish, bread, and eggs, and not enough of the alkaline foods like oranges, apples, cabbage, carrots, celery, and spinach, it is well to know this little trick of figuring price. The money saved by getting four pounds of steak, instead of six will go a long way toward taking care of fruit cups, salads, and light desserts for a day.

Mark Sanford will open an electric and radio shop in the Corner building at Warrenton.

Bids are advertised for the construction of the Penn Street approach to Swan Island airport, Portland.

How to Raise Poultry
By Dr. L. D. LeGear, V. S.
St. Louis, Mo.
Dr. LeGear is a graduate of the Ontario Veterinary College, 1897. There are 25 years of veterinary practice on diseases of live stock and poultry. Resident authority on poultry and stock raising. Nationally known poultry breeder. Read notices and letters.

The question which is best, hen or incubator, has been discussed pro and con almost as much as the prime favorite of old time high school debating societies: "Which came first, the chicken or the egg?" The real solution of the problem depends on circumstances. For a number of reasons, the commercial poultry raiser is forced to use the incubator. For the owner of the average back yard or farm flock, however, it often happens that hens will serve the purpose just as well and for a much smaller outlay. Unlike the commercial breeder, he can usually afford to wait until hens are broody and the problem of securing enough broody hens for his entire hatch is not very often encountered.

As far as results are concerned, one method is as good as the other if proper methods are employed.

First of all, considerable care should be exercised in the selection of hens used for hatching eggs. The following points are very important. The hen should have a well developed broody inclination; should be even tempered, free from nervousness and not too offensive when approached while setting. A yearling or two-year-old is more dependable than a pullet; never use pullets if you can avoid it. Use only hens that are large enough to thoroughly cover the desired number of eggs with a little to spare. Use only healthy, vigorous hens, in good flesh and having bright eyes and red combs.

Eggs should not be put under any hen until she has shown well developed signs of broodiness. It is a good plan to put several china eggs under her ladyship at first and confine her to the nest for a day or two. If at the end of the second day she still shows unmistakable signs of broodiness, remove the china eggs and give her the eggs to be hatched. Let her feel the eggs under her before releasing her. Then confine her to the nest for a day or two so that there is no danger of her deserting her trust.

A sitting hen should be given a place to herself where she cannot be disturbed by other hens trying to crowd into the nest with her. When it is necessary to set hens, each one should have an individual pen fenced off with chicken wire. If that is not practical, hens must be confined to their nests and only released at regular intervals so they can eat and exercise. Unless this plan is followed, you will often find two or more hens crowded onto one nest with eggs growing cold in the other nests.

If sitting coops are placed on high ground with sufficient drainage all around, nests may be placed directly on the ground. Scoop out a depression so the nest can be properly shaped to keep the eggs from rolling out. If conditions make it necessary to have a floor in the coop, sod or loose dirt can be used to support the outer edges of the nest. Better still, make the nest in a box about 6 inches deep and 15 inches square for ordinary breeds. For Asiatics, nest boxes should be from 18 to 20 inches square. Pack sod or earth in the corners to round them out. Then arrange your nesting material inside the depression so formed. The use of sod or earth is advisable because it helps to conserve the moisture so necessary during incubation.

To my mind, the ideal nesting material is clean fine straw or hay. It is difficult to shape a nest with long coarse straw. Leaves are sometimes used for nests and are quite satisfactory.

Having provided the hen with adequate nesting facilities, the next consideration is to provide proper food and exercise. The hen should be permitted to leave her nest occasionally to eat and exercise but must not be allowed to stay off the eggs until they get chilled. Feed her equal parts of wheat and corn on the ground or in a pan near the nest, but feed no mash. Provide plenty of pure, fresh water, salt and charcoal. The sitting hen will usually leave her nest once a day for feed and water. If she does not, take her off and close the nest so she cannot get back too soon. If she stays away too long, take her gently away from the food and put her back on the nest. If the weather is rather cool, she should not leave the eggs more than 10 or 20 minutes. In mild weather she may stay away somewhat longer.

Visit your hens regularly while they are sitting and watch them closely. If a hen is a good sitter, she will stick right on the job and give you very little trouble, but some hens are restless, mash the eggs by moving about or newly hatched chicks. Chicks should be taken from such hens as fast as

they are hatched and put in an incubator or under some other hen. Always remove empty shells. Otherwise they may slip over other eggs and another chicks struggling to get out of their shells. Also, whenever an egg is broken during the earlier stages of hatching, remove it. If its contents are smeared over other eggs, wipe them clean with wet cloth and return them to the nest at once. Use only lukewarm water for this purpose. Make necessary examination of the nests while your hens are eating to avoid disturbing them.

Needless to say, thorough sanitation of nests and coops is necessary. The coop or building in which hatching is done should be thoroughly disinfected, at least once a week. The nest not only should be kept clean, as suggested above, but the hen should be thoroughly dusted with live powder before hatching is started and again on the seventeenth day.

LOCAL NEWS

Dr. and Mrs. J. R. Talbert were dinner guests of Mr. and Mrs. Essex Marsh, Tuesday evening.

Luncheon guests of Mr. and Mrs. Essex Marsh, Tuesday, were Mr. and Mrs. J. W. Sprague.

Mrs. H. A. Eliander who has been confined to her home with illness is able to be out again.

John Welter of Chicago is visiting indefinitely at the home of his father, M. Welter.

Mrs. Plant of Huber is spending several days with Mrs. B. G. Donaldson.

Dr. Homer Taylor of Portland was a breakfast guest of Mr. and Mrs. Essex Marsh.

Maude Miller of Portland spent Sunday at the home of her mother, Mrs. E. Davis.

Mr. and Mrs. O. Breittin spent the week end at Newport returning home, Tuesday.

Louis Hughson and Otto Erickson spent Sunday on Mr. Erickson's farm at Banks.

Sunday dinner guests at A. Chinn home were Mr. and Mrs. Robert Dookittle and family of Vancouver, Wn.

Jackie, son of Mr. and Mrs. Essex Marsh, has been quite ill with the croup, but is getting much better.

Mrs. H. S. Davis and son Norman of Knappa were Saturday and Sunday guests at the home of L. Hughson.

Mrs. Anna A. J. Bair is spending several days visiting in the home of her daughter, Mrs. R. B. Denney and family.

Mr. Noah Snyder who has been quite ill at the Emanuel hospital was able to return at the end of last week.

Mrs. M. E. Underhill spent Tuesday visiting with Mrs. Hugh Lewis of Aloha, Mr. Underhill going out later for dinner.

Miss Hilda Stewart, former second trick operator at the local depot, visited relatives at La Grande over the week end.

The Ladies Aid of the Methodist Church held a tea in the church basement, Wednesday afternoon. There was a good attendance.

Mrs. Mary E. Kendall of Port Orchard, Washington, is visiting at the home of her daughter, Mrs. A. J. Kolkenbeck at Westdale.

Mr. and Mrs. W. R. Vankleek and daughter Catherine attended a card party at the home of Mr. and Mrs. J. D. Daniels in Kinton, Saturday evening.

The ladies of the Whitford Women's club held a pot luck luncheon at the club hall Wednesday. The balance of the afternoon was spent in tying a quilt.

A dance will be given at the Huber Hall on March 15, 1930 by Beaverton Masonic Building Assn. There will be a six-piece orchestra. Refreshments. Admission, 50 cents. Everybody come. adv. c-14-15

Genevieve, Lois, and Harold Shearer of Forest Grove, Oregon, were dinner guests at the home of their aunt, Mrs. Louis Hughson. They stayed for the basketball game and Mrs. Hughson and Mrs. E. Davis took them home Saturday.

Ivan Swift, for some time connected with the Portland Electric Power Co. here has accepted a position with the Yamhill Electric Co. at Sheridan. He expects to enter on his new duties Monday. Later his family will join him.

The National Day for prayer for missions will be observed Friday, March 7. A meeting will be held at the First Presbyterian Church of Portland. Mrs. T. A. Dungan of Beaverton will have charge of one hour of the morning session.

Mr. and Mrs. C. J. Stevens were called out of town Wednesday to attend the funeral of Mrs. Byron Stevens, Mr. Stevens' sister-in-law, formerly of Hillcrest. Services were held at Finley's with interment in the Evergreen cemetery at McMinnville.

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For Sale—1922 Ford delivery. Platform body; good running order; price, \$26. J. H. Hulett, Beaverton, Ore. adv. c-15-16

Good, pure milk promotes health, especially at this time of year. Drink lots of it. Beaverton Sunrise Dairy, A. Camenzind, proprietor. Adv. c-15-16

For Sale—Six month old high grade Guernsey heifer. E. Hawley Watson at Jacob St. Beaverton, Ore. c-11-17

For Sale—Three year-old goats. \$3.50 each. \$10 for all. George Camp. Mile and a half south on Watson St. Beaverton. Phone. 3852. p-14

For Sale—Barred Rock setting eggs. O. A. C. strain. Mrs. C. W. Struthers, Beaverton, Oregon, Rt. 3, Box 350. p-14

For Sale—Used doors and sash with frames. Very reasonable. Beaverton 2425. J. B. Gilsdorf, Huber, Ore. c-14-17

For Sale—Vulcan Gas range, like new, for \$8, cash. Barbara Frohauer, Beaverton, Ore. adv. c-14

WANTED

Wanted—Work, any kind. Have several men with families that need any kind of employment. Phone 5902. C. E. Hedge chairman, Relief Committee, Beaverton Chamber of Commerce. p-14

Wanted—Men to cut rickwood and cordwood. H. E. Grabhorn, Route 3, Beaverton. One mile south of the Hazeldale store. p-14

Wanted—Housework by the hour. 35¢. Mrs. Ivy Martin, Beaverton. Phone 8903. p-14

Two dependable high school girls would care for children while parents are away. Phone 8903, Beaverton, Oregon. p-14

MISCELLANEOUS

Old Time dance at Kinton Thursday evening, March 13th. Door prize given. adv. c-14

A modern dance will be given at Cedar Mills Hall on Saturday, March 8th. Tickets, including supper, are \$1.00. p-15

Advertisements in this column 1 cent a word. Minimum charge 25¢. Blossom buds of fruit buds a larger and plumper than leaf buds.

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