

Water Heating

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type of heater is especially useful for sink use.

Surprising though it may seem, a 500-watt local storage heater of 1½ gallons capacity, fitted at the sink and delivering water at 190 deg. Fah., will provide for all the kitchen requirements of the average house. A heater used for such a purpose should be so lined that water delivered from it can also be used for culinary purposes.

A comparatively high-temperature water heater is desirable for several reasons. A smaller tank (an important point in the modern house where space is valuable) will do the same work as a tank of greater capacity containing water at a lower temperature. In addition, the water being really hot, waste is eliminated by preventing washing operations being carried out under the running water, which is usually the case with water at a lower temperature.

The following are a few of the salient points necessary for a successful type of thermostatically controlled water heater:—

(1) Must be thoroughly insulated. There is one maker claims the losses are only 4 degrees in 24 hours.

(2) The thermostatic switch must be of a robust type, and fairly sensitive, as it is necessary to set it to fine limits.

(3) It should be provided with a mixing valve to enable a consumer to regulate the temperature of the water drawn off. This is not absolutely necessary, but it has many advantages, and is much neater than having a separate cold water tap.



A Cooking Hint.

—One that means lighter, fluffier, more delicious scones and cakes—with higher food value and a much longer period of freshness.

Add a few spoonfuls of ANCHOR SKIM MILK POWDER to every mixture.

Ask your grocer for "ANCHOR" TODAY.

PRICE 1/2 PER TIN.

Free Recipe Folder—write to "Anchor," Box 844, Auckland.

(4) The containing vessel should be copper-coated with pure commercial tin, thereby ensuring the absolute purity of the heated water.

The Ideal System?

AS a matter of fact, whatever system of domestic electric hot water supply is adopted none is ideal. The same is true, only to much more marked degree, with other heating agencies than electricity. I have expressed my own views on the matter several times in the past. While I admit that geysers, local storage tanks and other special arrangements have their own particular fields of usefulness, I do not think there is anything else capable of giving such all-round satisfaction in general domestic electric hot water supply as a central storage tank, provided that there are no long runs of pipes, in other words, all the outlet points should be reasonably close. Where there is some distance from the kitchen to the bathroom, it will probably be found more economical to have separate heating units. For efficient operation it must of course be effectively lagged to keep heat losses and correctly installed so that pipe run losses are reduced to a minimum. This can usually be arranged without much difficulty—particularly in compact modern houses. An important advantage of a central over local storage tanks is that hot water up to the full capacity of the tank can be drawn off at any service tap; also the central tank would be larger than an individual local tank.

Compared with geysers the central tank offers the advantage of quicker service however "adequately" the former may be loaded. It is impossible to get hot water quicker than the tap full open will discharge it—and that is what one gets at every draw-off point with a central storage cylinder. A particularly commendable feature of the central storage calorifier is that it permits both the users' requirements of quick service and supply undertaking interests in respect of favourable load characteristics to be met without real disadvantage to either. Cubic capacity of the tank, loading, and operating temperature can be proportioned in various ways to give the user the daily output of hot water he requires. There must also be a margin of output capacity to meet unusually heavy demands.

It may be provided either in greater cubic capacity or higher electrical loading. I am in favour of a high operating temperature which enables a smaller dimensioned tank to be utilised for a given hot water output. The bogey of high temperature is increased heat losses, but those who raise this objection are rather inclined to forget that the heat loss is dependent on the effectiveness of the insulating lagging. A small high temperature storage tank thoroughly well insulated offers less cooling surface than a larger one containing the equivalent in hot water quantity at a lower temperature, and if the latter be less effectively lagged it may actually lose more heat even though its rate of heat loss, B.Th.U.'s per sq. ft. of exposed surface, be less than in the former case.

As regards pipe run losses and waste it is obvious that the higher temperature of the water the greater is the heat loss, but whatever system of hot water service is employed some heat losses there must be whether

Electricity for Cheapness

LOOKING into the cost of running all-electric houses, we have obtained the following figures, which are vouched for by the electricity Department of the Wellington City Council:—

| | £ | s. | d. |
|--|---|----|----|
| House with 15 lights, iron, water-heater, 2 radiators, and electric range: average cost per month | 1 | 2 | 0 |
| Another with 21 lights, iron, 2 radiators, water-heater, wash boiler, and range | 1 | 17 | 0 |
| Another with 21 lights, iron, 2 radiators, water-heater, electric range, bath-heater, and tap-heater | 1 | 6 | 8 |
| 14 lights, 6 radiators, water-heater, and electric range | 2 | 13 | 3 |
| 19 lights, iron, radiator, water-heater, and range | 1 | 8 | 9 |
| 20 lights, 6 heating points, water-heater and range | 1 | 11 | 0 |
| 92 lights, iron, radiators, water-heater, and electric range, a really extensive installation | 4 | 1 | 7 |

It does not require much imagination to realise the high standard of comfort in these homes, at a cost, in many cases, below what is spent in many houses on fuelling the kitchen range alone.

Electricity Interests English Women

MISS HASLETT, of the Women's Electrical Engineering Society, speaking in London last October, said that a very large number of women are now interested in electrical problems. At first men "pooh-poohed" the idea, but now one man complained that now he was no longer looked up to as the man of the house, for when anything went wrong, his wife said, "Oh, don't bother, George, I can put that right."

Continuing, the speaker said, an old lady living in a village, wrote to an electrical engineer, saying, "When next you are in this village, will you please call upon me with your vacuum cleaner, as I should like my house electrically cleaned, but as we have no electricity in the village, please bring some with you."

The development of electricity has been so quiet that few people realise that to-day half of England's factories, two-thirds of Germany's, and three-quarters of America's factories are electrified.

high or low temperatures be used, local or central storage tanks, geysers, or anything else.

The point that is really important is that the losses in respect of a high temperature central storage cylinder are not excessive, particularly if automatic thermostatic control is fitted.

In conclusion may I suggest that anyone desirous of installing an electrical hot water service, should consult the local supply authority and obtain advice from their engineer as to the most economical system to adopt. In Wellington officers are specially trained for this service.

Electricity in Schools Classes for Juniors

PUPILS in the fifth, sixth, and seventh grades of the Fort Erie (Ontario) schools attended a series of classes held at the Canadian Power Company's store in that city on Saturday mornings during the spring of this year. The classes, which were called "Electricity for Juniors," were designed to give pupils a thorough course in the use of various electrical household appliances.

The youngsters were shown how to cook and bake with the electric range, and were given an opportunity to personally demonstrate their knowledge by baking cookies and various other delicacies on the range in the model kitchen. Many clever and interesting features were brought into the lessons, such as puzzle pictures of appliances which were to be put together by the younger children, and the making of favours. One morning was devoted to laundrywork, at which the pupils laundered their own blouses by using the electric washer and ironer.

At each session refreshments were served to enhance the appeal to the children. Essays were written by those attending, which were forwarded to the company by the regular school teachers.

When "Fevvers" Don't Fly

PLUCKING birds is one of the novelty uses to which electricity has been put. The mechanical plucking machine appears to be an almost intelligent and wholly desirable device, which not only plucks the birds, but bags the short body feathers, automatically rejecting the "longs" and studs. A current of air which collects the pluckings continues to blow through the bag all the time it is filling, thus drying out the feathers and completing its duties. While this machine is for big-scale operation, the near future may bring to many lucky housewives the pleasure of having the long-cherished turkey thus attended to, with the assurance that his feathers are safely tied up in a bag and not lying on the best carpet. The apparatus is controlled by a 1½ to 1½ h.p. motor, and has a capacity of 60 birds per hour.

Dosing the Cat

CATS, being one species of flesh, are subject to some of its ills, and like ourselves when mopey and out-of-sorts, are not often at their most amiable, so that it requires some courage to dose poor puss. Try mixing some butter and flowers of sulphur well together, and smear the mixture on the cat's coat. Its inherent love of cleanliness will cause it to lick the mixture off, and it will have had sufficient for one day. The dose can be repeated daily until the cat is quite well.

Visitor: Toothbrush, please.

Village shopkeeper: Sorry, zur. Our stock o' summer novelties bain't in yet.