

spoiled. We have occasionally failed to cook a large joint of meat a sufficient time, but we have never spoiled a dish in the process of cooking since the pulp or jacketed oven was adopted.

What, then, are the simple principals of the science of cooking? I think they may be stated in a few very plain terms:

1. The heat should be derived from fuel which can be wholly consumed or wholly converted into the products of complete combustion without any chimney except that of the lamp or burner.

The same may be said of illuminating gas when used in one of the burners of the Bunsen type which supply an excess of oxygen and yield the blue flame.

The combustion of oil and of gas can be brought under absolute control by gauging the size of wick or burner to the work to be done.

2. The oven in which the food is to be subjected to this measurable and controllable source of heat must be so constructed that the heat imparted to it may be entrapped and accumulated up to a certain measure or degree and then maintained at that temperature without substantial variation until the work is done. This can be done by jacketing the oven in a suitable way with material which is incombustible and also a non-conductor of heat.

3. There should be no direct communication between the true oven or receptacle in which the food is placed and the source of heat, least the food should be exposed to being in places burned or scorched.

These three conditions are all accomplished in the two somewhat crude and probably incomplete inventions which I have named the "Aladdin Cooker" and the "Aladdin Oven," in both of which the heat derived from common lamps, such as are used for lighting, may be stored or accumulated so as to do the work of cooking in a very perfect manner. In the cooker the heat is imparted to water in an attachment to a metal-lined wooden box corresponding to the water-back of the common range or stove, and the work is

done by the contact of the hot water with the outside of the porcelain vessels in which the food is placed, or by the steam generated when the water is heated to the boiling-point.

In the oven a column of heated air is carried from the chimney of the lamp to the inside of an outer oven made chiefly of prepared wood-pulp, but outside of the inner sheet-iron or metallic oven in which the food is placed, which inner oven is separately ventilated.

I do not claim originality in these simple principles or in the idea of jacketing an oven with non-conductors of heat. All these matters are well understood by every intelligent stove-manufacturer, but it is practically impossible for any one to apply them in making stoves such as will meet the demand of the market, for two reasons:

1. The greatest demand for stoves is that of people of very moderate means, who are too much controlled by the price in making a choice, making the common error in confounding cheapness with low price, an error which leads to great waste not only in the matter of stoves but in many other ways.

2. The absolute and imperative preference of the public for a stove in or upon which the work can be done very quickly.

The custom of cooking quickly is in part a matter of choice, and in part due to the necessity to which a great many working people are subject to cooking their meals quickly or else to go without hot breakfasts and dinners.

Another great obstruction to improvement in the art of cooking is the almost universal misconception that the finer cuts of meat are more nutritious than the coarser portions, coupled with the almost universal prejudice among working people against stewed food. This prejudice is doubtless due to the tasteless quality of boiled meat; boiling toughens each of the fine fibers, and deprives the meat almost wholly of its distinctive flavor.

All these blunders and misconceptions must evidently be removed before any true art of cooking can become common practice.