

or *ebullition* or bubbling up of the water, which has *no part whatever* in that operation.

Should any doubts still remain with respect to the inefficacy and inutility of boiling, in culinary processes, where *the same degree of heat* may be had, and be *kept up* without it, let a piece of meat be cooked in a Papin's digester, which, as is well known, is a boiler whose cover (which is fastened down with screws) shuts with so much nicety that no steam can escape out of it. In such a *closed* vessel, boiling (which is nothing else but the escape of steam in bubbles from the hot liquid) is absolutely impossible; yet, if the heat applied to the digester be such as would cause an equal quantity of water in an open vessel to boil, the meat will not only be *done*, but it will be found to be dressed in a shorter time, and to be much tenderer, than if it had been boiled in an open boiler. By applying a still greater degree of heat to the digester, the meat may be so much done in a very few minutes as actually to fall to pieces, and even the very bones may be made soft.

Were it a question of mere idle curiosity, whether it be the *boiling* of water, or simply the *degree of heat* that exists in boiling water by which food is cooked, it would doubtless be folly to throw away time in its investigation; but this is far from being the case, for boiling cannot be carried on without a very great expense of fuel; but any boiling hot liquid (by using proper means for confining the heat) may be kept *boiling hot* for any length of time, without any expense of fuel at all.

The waste of fuel in culinary processes, which arises from making liquids boil unnecessarily, or when nothing more would be necessary than to keep them *boiling hot*, is enormous; there is not a doubt but that much more than half the fuel used in all the kitchens, public and private, in the whole world, is wasted precisely in this manner.

But the evil does not stop here. This unscientific and slovenly manner of cooking renders the process much more laborious and troublesome than otherwise it would be; and (what by many will be considered of more importance than either the waste of fuel, or the increase of labour to the cook) the food is rendered less savoury, and very probably less nourishing, and certainly less wholesome.

It is natural to suppose that many of the finer and more volatile parts of food (those which are best calculated to act on the organs of taste) must be carried off with the steam, when the boiling is violent: but the fact does not rest on these reasonings: it is *proved* to a demonstration, not only by the agreeable fragrance of the steam that rises from vessels in which meat is boiled, but also from the strong flavour and superior quality of soups which are prepared by a long process over a very slow, gentle fire. But the volatile parts of food are not only delightful to the organs of taste—the Editor has no doubt that they are also stimulating and refreshing to the stomach.

In many countries where soups constitute the principal part of the food of the inhabitants, the process of cooking lasts from one meal time to another, and is performed almost without either trouble or expense.