of the other : and *it is obſerved,* that when this is done, the diſh in the under veſſel is more expeditiouſly and better dreſſed, and the upper diſh is more ſlowly, but as completely ſtewed.

This deſcription of one ſtewing veſſel may ſerve to give a notion oſ the whole ; only we muſt obſerve, that when broths, ſoups, and diſhes with made ſauces or con­taining liquids, are to be dreſſed, they muſt be put in­to a ſmaller veſſel, which is ſet into the veſſel PQRS, and is ſupported on three ſhort feet, ſo that there may be a ſpace all round it of about an inch or three quar­ters of an inch. It is obſerved, that diſhes of this kind are not ſo expeditiouſly cooked as on an open fire, but as completely in the end, only requiring to be turned up now and then to mix the ingredients; becauſe as the liquids in the inner veſſel can never come into ebullition, unleſs the ſteam from the boiler be made of a danger­ous heat, and every thing be cloſe confined, there can­not be any of that tumbling motion that we obſerve in a boiling pot.

The performance oſ this apparatus is far beyond any expectation we had formed of it. In one which we examined, six pans were ſtewing together by means of a boiler 10 1/2 inches in diameter, ſtanding on a bridle open fire. It boiled very briſkly, and the ſteam puffed fre­quently through the chinks between the ſtew-pans and their covers. In one of them was a piece of meat conſiderably above 30 pounds weight. This required above four hours ſtewing, and was then very thoroughly and equally cooked ; the outside being no more done than the heart, and it was near two pounds heavier than when put in, and greatly ſwelled. In the mean time, several diſhes had been dreſſed in the other pans. As far as we could judge, this cooking did not conſume one-third part of the fuel which an open fire would have required for the ſame effect.

When we conſider this apparatus with a little more knowledge of the mode of operation of fire than falls to the ſhare of the cooks (we ſpeak with deference), and conſider the very injudicious manner in which the steam is applied, we think that it may be improved ſo as to ſurpaſs any thing that the cook can have a no­tion of.

When the ſteam enters the ſtew-pan, it is condenſed on the meat and on the vessel ; but we do not want it to be condenſed on the vessel. And the ſurface of the veſſel is much greater than that of the meat, and conti­nues much colder ; for the meat grows hot, and conti­nues ſo, while the veſſel, made of metal which is a very perfect conductor of heat, is continually robbed of its heat by the air of the kitchen, and carried off by it. If the meat touch the side of the pan in any part, no ſteam can be applied to that part of the meat, while it is continually imparting heat to the air by the inter­medium of the veſſel. Nay, the meat can hardly be dreſſed unleſs there be a current of ſteam through it; and we think this confirmed by what is obſerved above, that when another ſtew-pan is ſet over the firſt, and thus gives occasion to a current of ſteam through its cullen­der bottom to be condenſed by its ſides and contents, the lower diſh is more expeditiouſly dreſſed. We ima­gine, therefore, that not leſs than half of the ſteam is wasted on the sides of the different stew-pans. Our firſt attention is therefore called to this circumſtance, and we wiſh to apply the ſteam more economically and effec­tually.

We would therefore construct the ſteam-kitchen in the following manner :

We would make a wooden cheſt (which we ſhall call the Stew-chest) ABCD. This ſhould be made of deal, in very narrow slips, not exceeding an inch, that it may not ſhrink. This ſhould be lined with very thin copper, lead, or even ſtrong tinfoil. This will prevent it from becoming a conductor of heat by ſoaking with ſteam. For further ſecurity it might be ſet in another cheſt, with a ſpace of an inch or two all round, and this ſpace filled with a compoſition of powdered charcoal and clay. This ſhould be made by firſt making a mixture of fine potter’s clay and water about as thick as poor cream : then as much powdered charcoal muſt be beat up with this as can be made to ſtick together. When this is rammed in and dry, it may be hot enough on one side to melt glaſs, and will not discolour white pa­per on the other.

This cheſt muſt have a cover L M N O, alſo of wood, having holes in it io receive the ſtew-pans P, R. Between each pan is a wooden partition, covered on both ſides with milled lead or tinfoil. The whole top muſt be covered with very ſpungy leather or felt, and made very flat. Each ſtew-pan muſt have a bearing or ſhoulder all round it, by which it is ſupported, resting on the felt, and lying ſo true and cloſe that no ſteam can eſcape. Some of the pans ſhould be simple, like the pan F, for dreſſing broths and other liquid diſhes. Others ſhould be like E and G, having in the bottom a pretty wide hole H, K, which has a pipe in its upper ſide, riſing about an inch or an inch and half into the ſtew-pan. The meat is laid on a cullender plate as in the common way ; only there muſt be no holes in the cullender immediately above the pipe.— Theſe ſtew-pans muſt be fitted with covers, or they may have others fitted to their mouths, for warming fauces or other diſhes, or ſtewing greens, and many other ſubordinate purpoſes for which they may be fitted.

The main-pipe from the boiler muſt have branches, (each furniſhed with a cock), which admit the ſteam into theſe diviſions. At its firſt entry ſome will be condenſed on the bottom and ſides ; but we imagine that theſe will in two minutes be heated ſo as to condenſe no more, or almoſt nothing. The ſteam will alſo quickly condenſe on the ſtew-pan, and in half a minute make it boiling hot, ſo that it will condenſe no more ; all the reſt will now apply itſelf to the meat and to the cover. It may perhaps be adviſable to allow the cover to condenſe ſteam, and even to waſte it. This may be promoted by laying on it flannel ſoaked in water. Our view in this is to create a demand for ſteam, and thus produce a current through the ſtew-pan, which will be applied in its paſſage to the victuals. But we are not certain of the neceſſity of this. Steam is not like com­mon air of the ſame temperature, which would glide along the ſurfaces of bodies, and impart to them a ſmall portion of its heat, and eſcape with the reſt. To pro­duce this effect there *muſt* be a current ; for air hot enough to melt lead, will not boil water, if it be kept ſtagnant round the veſſel. But ſteam imparts the *whole* of its latent heat to any body colder than boiling water, and goes no farther till this body be made boiling hot.