its laſt diſcharge be conſiderably higher than its entry from the fire-place), would be the moſt effectual. We have ſeen a very ſmall ſtove conſtructed in this way, the whole being incloſed in a handſome caſe of poliſhed iron plate, pierced arid cut into elegant foliage like the cock oſ a watch, ſo that the odd looking pipes were completely concealed. Though only three feet long, one foot thick, and six feet high, it warmed a very lofty room of 24 feet by 18, and conſumed leſs than half the fuel of a ſtove of the more uſual make, which did not ſo fully warm a ſmaller chamber.

It would occupy a volume to deſcribe the immenſe variety of ſtoves which ingenuity or architectonic taſte has conſtructed. We ſhall content ourſelves with giving a ſpecimen of the two chief classes into which they may be diſtinguiſhed.

The air of a room may be equally warmed, either by applying it to the ſurface of a ſmall ſtove made very hot, or to the surface of a much larger ſtove more mo­derately heated. The firſt kind is chiefly uſed in Hol­land, Flanders, and the milder climates of Germany and Poland. The laſt are universally uſed in the frozen climates of Ruſſia and Sweden. The firſt are generally made of caſt-iron, and the laſt of brick-work covered with glazed tiles or ſtucco.

@@Fig. I. repreſents a ſmall German ſtove fully suffi­cient for warming a room of 24 feet by 18. The baſe is about three feet broad and 14 inches deep, that is, from back to front, and six or seven feet high. The decoration is in the faſhion of that country ; but the operative ſtructure of it will admit of any ſtyle of orna­ment. A, is the fire-place, and the wood or charred coal is laid on the bottom, which has no bars. Bars would admit the air too freely among the fuel, and would both conſume it too faſt and raiſe too great a heat. That no heat may be uſeleſsly expended, the ſole of the fire-place and the whole bottom of the ſtove is rai­ſed an inch or two above the floor of the room, and the air is therefore warmed by it in ſucceſſion, and riſes up­wards. For the ſame reaſon the back of the ſtove is not in contact with the wall of the room, or of the niche in which it is placed. The fire-place is ſhut up by a door which fits cloſely to its caſe, and has a small wicket at the bottom, whoſe aperture is regulated by a sliding plate, ſo as to admit no more air than what suffices for slowly conſuming the fuel. The flame and heated air rise to the top of the fire-place three or four inches above the arch or mantle-piece, and get out laterally by two narrow passages B, B, immediately below the top plate of the baſe. The current bends downward on each side, passes at C, C, under the partition plates which divide the two side chambers, and then riſes upwards through the outer diviſion of each, and passes through narrow slits I), D, in the top plate, and from thence along the two hollow piers E, E. The two lateral currents unite at the top of the arch, and go through the ſingle paſſage F into the larger hollow behind the eſcutcheon G. From this place it either goes ſtraight upwards into the vent in the wall by a pipe on the top of the ſtove, or it goes into the wall behind by a pipe inſerted in the back of the ſtove. The propriety oſ this conſtruction is very obvious. The current of hot air is applied to exterior parts of the ſtove everywhere except in the two side chambers of the baſe, where the partition-plates form one side of the canal. Even this might be avoided by making each of theſe side-chambers a detached hollow pillar. But this would greatly increaſe the trouble of conſtruc­tion and joining together, and is by no means neceſſary. The arch H has a graceful appearance, and affords a very warm ſituation for any thing that requires it, ſuch as a drink in a ſick perſon’s bed-chamber, &c. Perſons of a certain claſs uſe this place for keeping a diſh warm ; nay, the lower part of the arch is frequently occupied by an incloſed chamber, where the heat riſes high enough even for dreſſing victuals, as will be eaſily ima­gined when we reflect that the ſole of it is the roof of the fire place.

The ſtove now deſcribed is ſupplied with fuel and with air by the front door opening into the room. That there may be room for fuel, this middle part projects a few inches before the two side chambers. Theſe laſt, with the whole upper part of the ſtove, are not more than ten inches deep. The passages, therefore, from the fire-place are towards the back of it ; ſo that if we have a mind to ſee the fire (which is always cheerful), the door may be thrown open, and there is no danger of the ſmoke coming out after the current has once warmed the upper part of the ſtove. When the ſtove is of ſuch dimenſions that the baſe is about two feet and a half or three feet high, the fire-place may be furniſhed with a ſmall grate in the Britiſh ſtyle. If the door is ſo hung that it can not only be thrown back, but lift­ed off its hinges, we have a ſtove grate of the completeſt kind, fully adequate, in our mild climate, to warm a handſome apartment, even with an open fire ; and when we hang on the door, and ſhut up the fire-place, a ſtove of the dimenſions already given is almoſt too much for a large drawing-room.

We have frequently remarked, that one side of theſe ſtoves grows much warmer than the other, and that it was difficult to prevent or remedy this ; and we ima­gine that this is an unavoidable defect in all ſtoves with a double flue. It is ſcarcely poſſible to make the fire ſo equable in the fire-place, that one side ſhall not be a little warmer than the other, and a briſker current will then be produced in it. This muſt increaſe the conſumption of the fuel on this side, which will increaſe the current, will heat this side ſtill more, and thus go on continually till the fuel on this side is expendcd ; after which the other side will obtain and increaſe the ſuperiority. The flue is made double, that the fire-place may occupy the middle of the front ; and it will be difficult to gain this point of ſymmetry with one flue. The inconvenience may, however, be corrected by damp­ing valves placed in ſome part of the upright funnels E, E.

In the colder winters on the continent, it is thought neceſſary to increaſe the effect by making the fire-place open to the back of the ſtove. Its mouth or door com­municates with or is joined to an opening of the ſame dimenſions formed in the wall, and the door is on the other side in an antichamber or lobby. In Weſtphalia, and other places of Germany, the apartments are diſpoſed round a ſpacious lobby, into which all their fire­places open, and are there ſupplied with fuel. By this conſtruction it is plain that the air of the room, already warmed by the ſtove, is not carried off, and the room is more heated. But this method is very unfavourable to cheerfulneſs and health. The ſame air confined, and

@@@[mu] Plate CCCCLXXIV.