two winged sons of Boreas, slain by Hercules ; and there are others in China and other countries.

STOPPERS, in a ship, certain short pieces of rope, which are usually knotted at one or both ends, according to the purpose for which they are designed.

STORNOWAY, a parish, seaport, and chief town in the island of Lewis, Scotland. The town is situated on a point of land at the head of Loch Stornoway, and was originally placed there by James VI. and erected by him into a borough of barony, in order to act as a means of civilization for the Western Islands. The harbour is capacious and of good depth, and the shipping belonging to the port is much more extensive than could be supposed for a place so remote and uninviting. The town consists of several streets of well- built slated houses, having numerous shops. Its public buildings are a neat and commodious custom-house, a town-house, a parish church, an assembly-room, and two school-houses. The town is a fishing station, and a large propor­tion of the inhabitants are therefore employed in the white and herring fisheries. The resident feuars and burgesses elect the town council and magistrates, consisting of two bailies and six councillors. The revenue of the borough is very small. The gross custom-house receipts collected here in 1838 amounted to L.519.2s. 4d. The population of the pa­rish in 1821 amounted to 4119, and in 1831 to 5422. The increase of the population is ascribed to the gradual improve­ment of the parish, but more particularly to the erection of new stations or villages for the purpose of improving the soil and prosecuting the fisheries.

STOURBRIDGE, a town in the hundred of Halfshire and county of Worcester, 123 miles from London. It stands on the river Stour, over which is a good stone bridge. By a canal it has communication with most parts of the king­dom, and thus distributes its productions, which consist of glass-ware, ironmongery, and pottery. From some excel­lent clay to be found in the vicinity, the inhabitants make a great number of crucibles. It is an ancient borough, go­verned by bailiffs and other officers, but sends no members to parliament. It has a market on Fridays. The inhabi­tants amounted in 1801 to 3431, in 1811 to 4072, in 1821 to 5090, and in 1831 to 6148.

STOURPORT, a market-town of the county of Wor­cester, which owes its origin to the recent formation of basins at the junction of the river Stour with the Severn. In these basins the barges that pass on the canals in the north of England meet the vessels which ascend the Severn from Bristol and Gloucester; and thus goods are transmitted from one part of the kingdom to the other with regularity and economy. The vicinity abounds in coal, much of which supplies the salt-makers at Droitwich, as well as the glass-makers in and around the place, and the iron-workers also, who abound in the neighbourhood. The town is well built, most of the houses being of recent erection. There is *a* handsome chapel of ease, and a magnificent iron bridge over the Severn, with a single arch of 150 feet span. On Wed­nesdays and Saturdays it has markets, which are well sup­plied. It is 124 miles from London, and eleven from Wor­cester. As it is a part of the parish of Old Swenford, which lies in two counties, the population-tables do not suffici­ently show what has been the population of this new town at the four decennial parliamentary enumerations. It is now estimated at 6800.

STOVE, for heating apartments, green-houses, hot­houses, fruit-walls, &c.

When treating of the mechanical properties of air, we ex­plained the manner in which the expansion occasioned by heat produces the draught up the chimney ; and in the ar­ticle Smoke we considered the circumstances which tend to check, to promote, and to direct this current, so as to free us from the smoke and vitiated air which accompany the consumption of the fuel. Under Heat, the communi­

cation and radiation have been fully explained. By the former, the caloric is given from one object to another, and communicated from particle to particle of the same object *by contact;* by the latter, it emanates in straight lines, through the air, from substance to substance, the emana­tions being absorbed by some bodies, and reflected by others.

The power which objects possess of receiving and com­municating heat by the former of these modes, is termed their *conducting power ;* by the latter, their *radiating,* their *absorbing,* and *reflecting* power. Those which receive it quickly by the former, also give it off quickly in the same way ; and those which radiate powerfully also absorb power­fully ; of course they reflect little : accordingly the radi­ating and reflecting powers are opposed to each other. Metals are good conductors ; stones, bricks, and porous bo­dies of a similar nature, are bad conductors. The radiat­ing, reflecting, and absorbing powers depend not so much on the nature of the substance, as on the surface. Highly polished surfaces radiate and absorb little, while dark and rough ones radiate and absorb powerfully ; of course, re­splendent surfaces are good reflectors.

When fuel is consumed with the view of heating apart­ments, the communication of heat depends entirely on the manner in which it is consumed. In an open fire-place or common grate, the heat thrown into the apartment is chief­ly that emitted by radiation and reflection ; the former com­ing directly from the fuel, and from the parts of the fire-place warmed by it; the latter being the radiated heat re­flected by the polished parts of the grate. The rays thus thrown off, being absorbed by the objects in the room, then communicate warmth to the atmosphere which it contains. But part of the warmth must also be received by commu­nication ; for the walls adjoining the fire-place being heat­ed by *contact,* will likewise communicate caloric to the air brought in contact with them ; and as it is expanded it will ascend, and allow other particles to flow in, also to receive their supply. This however is small in comparison to that given to the apartment by radiation and reflection.

Much of the heat thus thrown into the room is carried off, indeed may be said to be lost ; for, owing to the manner in which the fuel is consumed, a large supply of air is ne­cessary for the combustion, which, rushing in upon the fuel, is itself, after acting on it, carried up the vent Hence, to warm apartments in this way, a great deal of fuel is re­quired. The quantity must depend very much on the form of the fire-place, and on the materials of which it is con­structed.

The principle on which stoves operate is different A stove, however modified in form, is merely a fire-place en­closed on all sides ; the air necessary for the combustion entering from below, and carried off, as in a common grate, by a vent Now, in this way of consuming fuel, the radia­tion is trifling in comparison to the communication by con­tact. Of course much must depend on the kind of stove employed ; but it is allowed, that by far the greater part of the heat which the atmosphere of the room receives is that given directly by communication ; for the air in contact with the sides of the stove is heated, is expanded, and carried upwards ; and thus, by the constant flow of cool air on the stove, the whole of that in the room is warmed. No doubt, the stove being itself warm, must give off heat, not only by contact, but also by radiation ; and the proportion thus emit­ted must depend on the temperature and surface, as already explained. But though heat is thus distributed, yet it must be borne in mind, that it is chiefly by contact that the at­mosphere of the room is warmed ; and as the air is thus easily heated, much less fuel is required than when it is burned in an open fire-place. The necessary supply of air is therefore not so great ; and it is this which principally causes the difference in our feelings when in a room warm-