

Farther trials
and alterations.

Since these trials, which were carried out in the winter of 1868-9, farther experiments have been made by Mr. Bunning on the Weardale, and some slight alterations made, among which may be mentioned the placing of a door at the hole piercing the plate between the ash-pan and air-plate flue, which being moved by a bar extending to the front of the furnace, permits the admission of air, *at will*, behind the fire. Under date of 14th April, 1870, Mr. Bunning (to whom I am indebted for much information on this subject, which I would here gratefully acknowledge, writes me :—

Success.

“We consider the Weardale, now perfect; she makes absolutely no smoke, and keeps her steam well.”

A proper discussion of the rationale of these experiments, and of their importance to our coal-trade, must be postponed to some future occasion. Much more might be said in favour of the use of steam-coals of the class under consideration, and it can be clearly proved, that, if properly burnt, they are at least as economical, as smokeless, and as easily stoked as any other class of coals.

Use of New-
castle coal in
the Navy.

The experiments above quoted, in connection with Government trials made at Devonport, already mentioned, have produced a material change of opinion with regard to Newcastle coal, and it has now taken a position second to none, among coals for the Navy, where it is chiefly used in admixture with Welsh coal, and the testimony of the very highest authority, is that a very large saving has already been effected by its use.

Necessity for
steam and
smoke-trials
of our coals.

It is hoped that enough has already been said to call the attention of our coal-owners and consumers to the urgent necessity of practical trials of a similar character to those above mentioned. Such experiments could be carried out at a very trifling cost, on any steamers, without interfering with their regular voyages; and though the great results of the North Country experiments might not be obtained, still, a great addition would be made to our knowledge of the coals, and that a very material improvement in the matter of steam and smoke would be made, cannot be doubted.

I shall close these remarks, which have already exceeded the length originally assigned to them, by an extract from a circular of the Coal Trade Association of Newcastle-on-Tyne, just received from Mr. Bunning. It is of interest as showing the results of the very latest trials.

RESULT OF EXPERIMENTS AT PORTSMOUTH, 1869-70.

Experiments at
Portsmouth
1869-70.

“A very comprehensive series of experimental trials have been carried out during the past twelve months on board Her Majesty’s steamers “Urgent” and “Lucifer,” at Portsmouth, with Welsh and North-