

## CORRESPONDENCE

SIR,

### An Unusual Logistic Requirement

On 7th November, 1956, the Flag Officer, Aircraft Carriers, Vice-Admiral M. L. Power, C.B., C.B.E., D.S.O. and Bar, transferred with a small operational staff to another ship, while the flagship returned to Malta for a few days. On passage, the Admiral's budgerigars escaped and were not seen again.

The Squadron Engineer Officer (and Staff Officer, Logistics) applied, on arrival in Malta, to the Fleet Engineer Officer, Captain A. J. Tyndale-Biscoe, O.B.E., M.I.Mech.E., A.F.R.Ae.S., for replacements, which were instantly provided, even as to colour and sex. The Fleet Engineer Officer is a fancier.

(Sgd.) P. L. CLOETE,  
Commander, R.N.

SIR,

### Trawler Engineering

Not having read the *Journal of Naval Engineering* (Vol. 9, No. 3) I had not previously seen the very instructive article 'Trawler Engineering' reprinted in the Royal Naval Reserve Sheet of 30th September, 1956.

Although Commander K. B. Clarke has written a very instructive and educative article the point he makes in respect of 'The deckie receives a proportionate share of the gross takings, whereas the enginemen receive a proportionate share of the net takings' is not correct.

Since 1946, following the Forster Inquiry (Command Paper, 6882), the poundage payment of all ratings—deck and engine room—has been determined on the gross takings.

In view of the excellence of the article, I thought I would like to draw your attention to this point.

(Sgd.) T. BIRKETT,  
National Secretary,  
Transport and General Workers Union.

SIR,

### Steering Gear

As a past Captain of destroyers, I was interested in the article, 'Steering Gear' by Lieutenant Middleton in your *Journal* for October, 1956. I have always thought that in the control of steering gear lay one of the greatest weaknesses of H.M. ships in battle against the enemy. A ship which cannot work its rudder is helpless. One only has to think of *Bismark* and the many merchant ships in distress in bad weather due to rudder trouble to appreciate this.

I have always considered that reliance on a few small copper telemotor pipes, probably not under armour, for controlling warships in action was fundamentally unsound and that the control should be as near to the rudder as possible. One splinter could cut the telemotor leads in a destroyer, especially in the space under the wheel-house, and put the ship out of control at a critical time. Steering would then have to be done from aft, so why not start aft as the author of the article suggests? This would dispense with the weakness involved in long telemotor leads.

Progress in rectifying this weakness has been much hindered by the reluctance of executive officers to be divorced from their quartermasters. This is a relic of the days of sail. In those days the Master used to control the ship from aft and had his quartermaster alongside him. The wheel was as near to the rudder as possible. With the advent of steam, the control of the ship went forward to the bridge. The Master or Captain insisted on taking his quartermaster with him, so the wheel had to go forward too. It is still there in merchant ships. In warships, the wheel, if not on the bridge, has never been far away and nearly always vertically below it. Here it was convenient for the quartermaster to see the next ship ahead ; but in many modern ships the view ahead has been blocked by guns.

I can see no reason from an executive point of view why the wheel and the quartermaster should not be aft. To ensure adequate communications, a combination of loudspeakers, sound-powered telephones, and wheel-order transmitters and receivers could be fitted. The leads could be run aft from the bridge on either side and so staggered vertically and horizontally from one another that it would be most unlikely for all to be cut in action unless great damage had been sustained.

Further, I have never understood why we continue in the Navy to pass orders for manœuvring from the Captain to the Navigator or Officer of the Watch, who relays them by voice down a tube to a sailor, who then works a telegraph, when the whole operation could be done without any verbal orders at all if telegraphs were fitted either side of the bridge. Merchant ships, fleet auxiliaries, tugs and various other types of vessel are all manœuvred by telegraphs so fitted. There would appear to be every advantage in having these telegraphs electric in order to dispense with rod gearing.

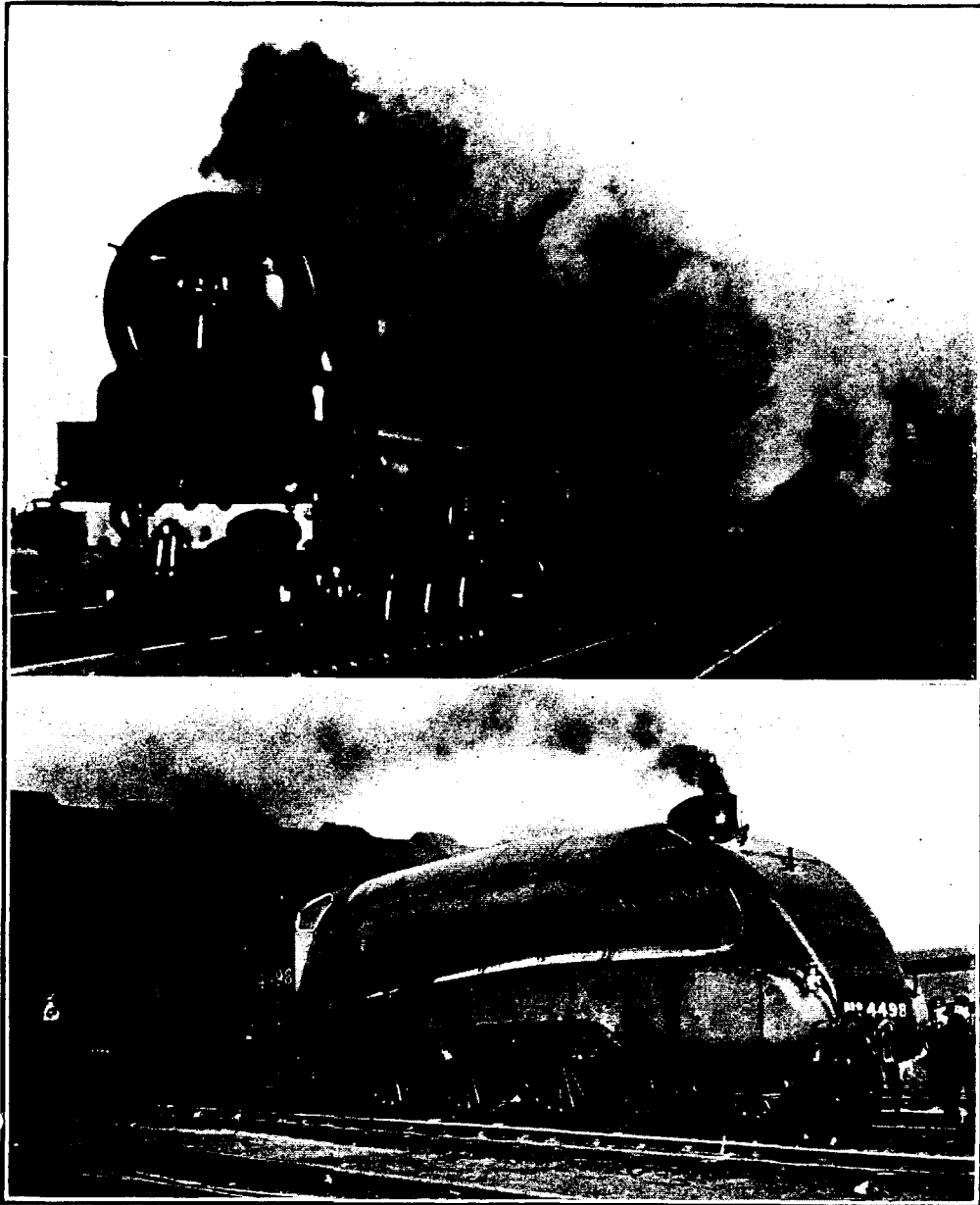
(Sgd.) G. T. COOPER,  
*Captain, R.N.*

SIR,

### **The Design of Funnels**

In the article, ' The Design of Funnels ', by Lieutenant-Commander T. F. Crang (Vol. 9, No. 1) the funnels illustrated have tops parallel to the sea or sloping backwards. Have ship designers considered railway experience ? There is much trouble with smoke on railways and a paper was presented at a joint meeting of the Institution of Locomotive Engineers and the Institution of Railway Signal Engineers in London on the 28th March, 1956, by O. S. Nock, ' Signalling from the Driver's Point of View ', which contained the following :—

' By far the most effective smoke deflecting device that has been noted by the author is the wedge-shaped semi-streamlined front of the Pacific engines introduced on to the London and North Eastern Railway by the late Sir Nigel Gresley in 1935. This shape, while not streamlined in its truest sense, does act most effectively as an aerodynamic screen, and many runs under extremely inclement and unpleasant weather conditions can be recalled in which the effect of it was to throw the exhaust steam well clear of the cab. A particularly important detail in this form of screening is the slight break in the line of the boiler immediately behind the chimney ; as originally designed the arrangement was not entirely satisfactory, but this small amendment appeared to make all the difference. The handicap of steam beating down needs no emphasis ; the author can recall occasions on locomotives that have been fitted with deflector screens, when the driver's view has been so obscured that steam has to be shut off on the approach to each distant signal in order to see them at all, and the effect on time-keeping in such conditions can well be imagined.'



*(The Institution of Railway Signal Engineers  
and The Institution of Locomotive Engineers)*

I was in charge of all the L.N.E.R. laboratories in 1935, and had the pleasure of playing some part in helping my chief, Sir Nigel Gresley, to reach his compromise between the Bugatti rail car flat sloping front, which had impressed him in France, and a symmetrically streamlined locomotive front end.

In the illustration, the lower photograph shows Sir Nigel Gresley's locomotive. The funnel or chimney stands up from a curved plane along which the clean air stream is forced. When the locomotive is running, there is, even with side winds, an ample coating of clean air passing along the boiler exterior which helps to raise the smoke from the chimney, above or to the side of the signal view-line from the driver's cab.

This makes me wonder whether the ships bridge and other forward superstructures could not be joined to, and past, the funnel as on the L.N.E.R. locomotive to give a relatively smooth flow. Such semi-streamlining should be continued to the sides and back of the funnel to help blend the air stream made by the ships passage with any side wind. In the L.N.E.R. locomotive this

blending has been effective, and the view from the driver's cab window along the side of the boiler is nearly always through smoke-free air.

May I therefore suggest that the low speed wind tunnel experiments made with funnels should include a ship's model in which the funnel and deck structure are blended with a forward sweep down.

Naval architects may be able to find some combination of uses for a skirt round the funnel, above which the chimney would protrude as in the L.N.E.R. locomotive. The shape of the skirt would probably be nearly that of a country gentleman's soft cap—the slope of the peak giving an upward thrust for the ship's motion air current, and the curved sides and back helping with the side wind components. Such a skirt in front of, and round, the funnel need not hamper the view from the bridge too much, but therein lies the need for ingenuity.

*(Sgd.) T. HENRY TURNER,  
Superintendent Metallurgy Division,  
British Railways Central Staff,  
Research Department.*