THE COATES' SPIRALCHROME ROLLER

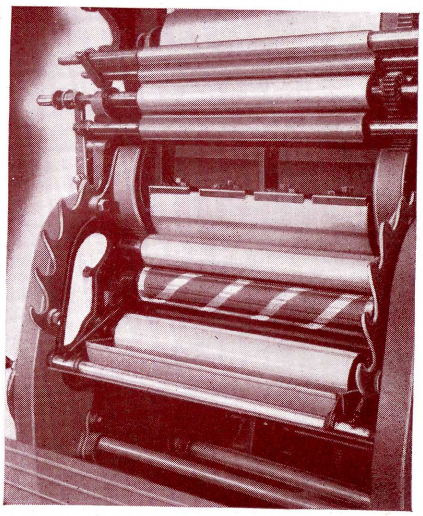
by A. C. B. MATHEWS, D.I.C., M.I.Chem.E.

THERE is a problem of lithographic damping, which, largely on account of its familiarity, has hitherto been circumvented by compromise adjustments depending on the skill of the operative rather than by any fundamental improvement of equipment design. The retarding effect of this problem on production has been accepted in the past as inevitable, consequently the means now made available by the Coates *Spiralchrome* Damping and Scavenging Roller to overcome it should be welcome.

The Problems

The whole matter centres on the performance expected of the brass or scavenging roller in the damping train of a lithographic press, which is required essentially to undertake two conflicting duties at once: it is expected to feed damp continuously at a uniform rate and to keep the dampers clean by scavenging the ink that they pick up from the plate to a greater or lesser extent. On zinc and aluminium plates, chemicals are required in the damping fountain to preserve the desensitised condition of the non-printing areas. If it were not for the necessity of keeping these chemicals at a low concentration to avoid ink emulsification and ink distributor stripping troubles it is probable that only as little damp would be required as for bi-metal plates, whose excellent printing qualities are partly dependent on the small quantity of water they need.

Details of Spiralchrome Roller



Spiralchrome Roller on Machine

Owing to the absence of grain on most types of bi-metal plates the optimum quantity of water has to be maintained between closer limits than would otherwise be the case, and the water feed apparatus on the modern lithographic press has in consequence a very exacting duty to perform.

Running less than normal water involves drier dampers, and consequently more tendency to pick up ink, which in turn demands more scavenging by the "brass" roller. The roller responds by feeding still less water, because it cannot perform both the opposed functions at maximum efficiency at the same time. Thus we have another of the typical lithographic situations responsible for despondency in apprentices and for the highly-developed resourcefulness of the experienced minder.

D. J. Black, faced with this problem, had the inspiration which resulted in the development of the Coates' *Spiralchrome* Scavenging Roller[1], which not only has an increased scavenging