timber until the woods are felled; but on a private estate, although the woods may form only a portion, perhaps only a small percentage, of the total area, they may yet have to pay a share of the duties out of all proportion to the income of the person concerned. This spells chaos in management and precludes an owner from having a proper 'working plan' in force, since death will probably result in its clauses becoming unworkable. In other words, continuity in the management of the woods is an impossibility. Moreover, as under the present system of taxation every proprietor knows that in the course of three or four generations the estate must be broken up, there is no encouragement towards correct woodland management. Mr. Orde-Powlett suggested conditional remission of death duties on agricultural land, the condition being that the sum so remitted should be spent on improvements which would be defined over a period of years.

Another cause is the neglect of owners to thin their woods properly and so obtain an intermittent revenue and also to fell the timber when it has reached maturity for market purposes. In this connexion, it has been suggested that all woodlands should be taken over by the State. Not only is this in opposition to the ordinary forestry economy in those European States where the best forest management is in force, but also it would be quite impracticable in Great Britain; and the same objections apply to the introduction of any form of compulsion on the part of the Government.

Mr. Orde-Powlett dealt with the present assistance available from the woodmen's training schools in existence, with the efforts of the various forestry societies, and the new type of consultant forester of which there are now a few firms. Good as is the work done by all these, their efforts only apply to those owners whose interest in their woods is already awakened. The majority do not fall within this category. As Mr. Orde-Powlett says, "a real comprehensive improvement depends on the arousing of forest consciousness amongst owners and in providing them with means to acquire knowledge". He advocates the establishment by the Forestry Commission, at a cost of twenty thousand pounds or so a year, of a comprehensive advisory service throughout the country.

"I would have woodland advisers, highly trained foresters, each with his area of country," says Mr. Orde-Powlett. This would be an excellent scheme if it was inaugurated by the owners themselves, a group of owners in a locality engaging and paying the salary of the highly trained woodland adviser. Otherwise, if engaged by Government (a sum of £20,000 is to cover salaries, offices, etc.) what prospects of a career would these advisers have? Even if such a service were inaugurated, what continuity to their work could be assured, as Mr. Orde-Powlett points out, with estates being broken up and dispersed in four generations, if not sooner, as a result of death duties. It would be quite impracticable for the State then to step in and take over as a working proposition small areas of woodland, however good the local management may have been, scattered all over the country.

If the Government has a real belief in the possibilities of forestry or its necessity in the interests of the community, the land must be so taxed that a continuity of management—and in forestry this means a continuity throughout a century and more—is assured. Without such an assurance it is difficult to see how the expenditure of public money in the interests of the private landowner can be justified.

Fibre Cores in Winding Ropes

WE have received the Safety in Mines Research Board Paper No. 97 upon "The Effect of Fibre Cores on Internal Corrosion in Colliery Winding Ropes", by J. E. O. Mayne*. The author states that the fibres used for the cores belong to the 'hard' group, the object of which is to provide a firm support for the steel strands of the rope. The material arrives in Great Britain in bales containing a number of so-called 'heads' and are subjected to the following four processes: (1) 'hackling', (2) spinning the fibre into yarn, (3) spinning the yarn into strands, and (4) spinning the strands into a complete core. To enable the fibre to be spun, it must be wetted by a so-called 'batching' fluid, which is 5–15 per cent of the weight of the fibre in thin mineral oil; the core is then treated with heavy mineral oil, which forms a lubricant; severe internal corrosion has been found in ropes containing Stockholm tar, and this material should on no account be used; this is perhaps one of the most valuable observations in the whole work. It is stated that "It is understood that the use of coal tar is also objectionable."

The author, who has experimented upon the subject for some time, arrives at the following conclusions: "(1) Batching and impregnating oils used in core manufacture do not decompose sufficiently, in practice, to cause appreciable corrosion of wire; on the contrary they protect it. (2) Darkening of the oils is due to the presence of impurities such as coal dust and iron oxide, and the oils retain their protective value until they are squeezed out. (3) Internal corrosion can take place without penetration of the rope by water containing harmful salts or acids derived from sources external to the rope. (4) Manila (and some other) fibres used for cores contain and are liable to develop formic and acetic acids as a result of bacterial action. (5) These acids can corrode wire ropes in the presence of moisture, even in the absence of oxygen; pressure between wire and core tends to accelerate the rate of attack, since it tends to remove the protective oils and increase the contact between fibre and steel. (6) The erratic distribution of corrosion is due to the sporadic nature of bacterial action. (7) Most of the harmful acid in raw manila fibre can be removed by cold water treatment, and it is suggested that subsequent bacterial action might be prevented by treating the washed fibre with an antiseptic which would not corrode steel. The practicability of these preventive measures has not yet been demonstrated."

* Mines Department: Safety in Mines Research Board. Paper No. 97: The Effect of Fibre Cores on Internal Corrosion in Colliery Winding Ropes. By J. E. O. Mayne. Pp. 38+4 plates. (London: H.M. Stationery Office, 1937.) 1s. net.