buildings that have been erected, however, show that with ordinary care the timber, even from quite young trees, is extremely durable. Much of the pine timber at present available is not suited for general constructional purposes, owing to the knotty character of the wood. This is not to be wondered at when it is considered that the existing plantations were never intended to provide building timber and were not planted under modern forestry conditions. It is indeed remarkable that plantations where the trees are often more than 12 feet apart should be capable of yielding any constructional timber at all.

There seems no doubt that when *Pinus radiata* is planted for the express purpose of yielding building timber excellent results will be obtained.

From the above it can be seen that considerable use is being made of *Pinus radiata* timber at the present time, and that the unwarrantable prejudice against its employment is rapidly becoming a thing of the past. Even if this very rapidly grown timber should prove to be inferior from the point of view of durability, the use of timber-preservatives should remove the only possible objection that can be raised against the planting of such a tree. Its great yield and rapidity of growth enable timber to be produced more cheaply than with any other tree, and this fact alone must place this pine in the forefront for afforestation purposes. Apart from building timber, the growing consumption of box timber in itself requires the extensive planting of some tree that will satisfy the future demand. In this respect *Pinus radiata* is especially suitable, and, were the timber useless for any other purpose, its production on a large scale would be more than justified.

Country House Lighting

(Contributed)

Most household inventions such as the sewing machine and modern cooking ranges benefit all sections of the community, and the man out back (provided his circumstances permit) is able to make his home almost as up-to-date and comfortable as that of his city cousin, while the advent of motor cars and good roads has taken away almost the last drawback of country life, i.e., isolation.

In the matter of house lighting, however, the country householder is at a serious disadvantage. Coal gas and electric light are in universal use in all large towns, and the city housewife would rather part with her sewing machine than lose her gas stove, and go back to kerosene lamps, which are used in most country homes to-day. A number of self-contained gaslighting systems are, of course, obtainable in New Zealand at present, but the majority of them are far from being an efficient substitute for coal gas or electric light.

Acetylene gas is a great improvement on kerosene lamps, but its objectionable features are well known. The gas is highly explosive and therefore dangerous, besides having an objectionable smell, while the cleaning and filling of the carbide trays, which have to be attended to almost every day, is a most disagreeable operation. The average life of an Acetylene plant is usually only about four years, and the present high cost of carbide makes the running expenses almost prohibitive.

Machine made gas, known as air gas, is made by mixing benzine vapour with air. The gas is generated in a large machine outside the house, and forced through ordinary gas pipes to the lamps by means of a small engine, or a series of pulleys, ropes and weights. The light produced is of excellent quality, but the plant is complicated, requires expert attention, and involves a considerable amount of labour to operate. The gas mixture varies with every change of temperature, and in frosty weather many air gas plants will not produce gas at all. Only the highest grade of petrol can be used in air gas machines.

Hollow-wire lighting systems which also generate gas from benzine vapour and air are in great demand at present. There are two kinds of hollow-wire plants on the market, but the one adopted by the New Zealand Government for use in country post offices, wireless stations, etc., appears to be the most up-to-date and efficient. The initial cost is small, the lamps are lighted by an ordinary wax match, and inverted gas mantles are used. The small generator, in which the gas is generated, is fitted with an automatic cleaning attachment, which keeps the gas tip clean, while for quality and general convenience the light compares very favourably with city gas. Excellent cooking facilities in the way of stoves and ovens are obtainable and any grade of petrol or benzine can be used, the plant requiring practically no attention. The other system works on much the same principle, but an asbestos torch dipped in methylated spirit is required to start it operating, while the generator must be frequently taken down in order that the tip may be cleaned.

The question of lighting for houses, shops, halls, churches, etc., in the country has been a bugbear to architects and builders for many years, and many of them are enquiring into the undoubted advantages supplied by the hollow-wire systems. On enquiry it was found that all of the plants at present being used by the New Zealand Government are giving complete satisfaction. One plant installed in the Awarua wireless station has been in constant use on an average of twelve hours per night for nearly a year, and according to the engineer in charge, has not developed a single fault, while during the past year hollow-wire systems have been installed in many of the finest country homes in the Dominion. When such satisfactory results have been achieved, there should be reason to conclude that the lighting problem in the country has been definitely solved.

Own your own Home!

Every man owes it to his family and himself and the community, to save and establish a home. He makes a better citizen in peace and war. You never hear of a man taking up a gun in defence of a boarding house.