

Fig. 19.—An enclosed chain drive to the dynamo. The chain is running in an oil bath in which oil is circulated to the chain drive and bearings by a belt-driven oil pump.

An alternative method to that already described for setting out level or easy sloping grades which may be of use in constructing either water raceways or laying off grades for farm roads is as follows:—An A-frame similar to Fig. 20 is made of light timbers with a span of 10 ft. or more. From the apex of this frame a weighted string of the length shown is hung. Next, two pegs are driven the correct distance apart in a shallow pond so that their tops are at water level. The frame is then rested on the pegs and the position at which the string passes across the cross-bar is marked. This is checked by turning the frame around end for end. If the string does not come against the same mark the

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pegs are not quite level and a second mark should be made. The mean of the two positions is permanently marked on the frame as level position.

In setting off a grade of, say, 1 ft. in 396 ft. with a frame of 11 ft. span, it will be necessary to raise one end one-third of an inch. A piece of wood of this thickness is fastened to one foot of the frame. In use, the A-frame is then rested on pegs driven at, say, 11 ft. intervals, the raised end being on the peg at the lower level. When this latter peg is driven so that the string on the frame crosses the previously marked level position the required grade has been set off.

Cost

The cost of the completed power house, including shed, pelton wheel,

governor and dynamo of 5 h.p. output as in the scheme illustrated (Figs. 6 to 12), is at present-day prices approximately £90. I am informed that maintenance on the whole installation, including motors and domestic appliances, should not exceed 5 per cent. of the capital cost per annum.

All electrical apparatus, piping and wiring, was, of course, an additional charge, and the farmer himself did the work required in the erection of the dam, raceway, etc. In this district many such installations are proving highly efficient and worthy investments saving otherwise heavy fuel purchase and giving cheap, continuous and reliable service.

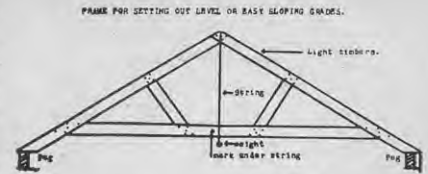


Fig. 20.—A frame suitable for laying off levels or easy grades.

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