

THE FAMILY TREE

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NEW BUILDINGS ADDED TO POTLATCH PLANT STREAMLINING

New Insurance Plan Effective July 1st Based on Earnings

The group insurance plan which has been in effect between Potlatch Forests, Inc., and the Equitable Life Assurance Society since 1929 has, after careful study, been revised to give larger benefits to the employees at less cost to them, and has been extended to cover woods employees, it is announced by Mr. Billings.

Instead of the old plan under which the amount of life insurance to which an employee was entitled was based upon his period of service, an employee being entitled to an increase of \$500 on the fifth and tenth anniversaries of his employment, and up to a maximum coverage of \$2,000, the new plan is based on the employee's earnings, both as to the amount of life insurance he may carry, and to the accident and health benefits he may receive.

The total and permanent disability feature is excluded in the new policy.

Accident and health benefits under the new policy will be payable for a period of 26 weeks, after a seven-day waiting period, as contrasted with a period of 13 weeks and a three-day waiting period in the old policy.

Effective July 1st

Life insurance on laid off employees may be continued for six months instead of three months under the former policy, upon the payment of the premium for that period in advance. The accident and health insurance on temporarily laid off employees may be continued in force for two weeks—or to the end of the current month, whichever is longest, as contrasted with immediate cancellation under the former arrangement.

The new plan becomes effective July 1, 1940, for all employees actually at work on that day. For employees who

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Modern Era of Sawmilling Brings Complete Reconstruction and New Operating Methods

By BOB OLIN

Potlatch unit is undergoing a complete overhauling, and modernization is here. Starting in the yards, it has swept through the plant. Briefly, here is the story:

The yard goes entirely to carriers and lift truck for transportation, the ground being leveled off and surfaced rough dry sheds being included in the

and to accommodate this new equipment, plan. Hard on the heels of this came the announcement of the planing mill reconstruction. Old machines were to be discarded—new ones re-located. The old battery tractors and lumber buggies were to give way to high speed carriers. The plan meant a complete reconstruction of the planing mill. The dry sheds have undergone a face uplifting. Posts were removed and provisions made to pile lumber with lift trucks.

The sawmill is to have a new setup to handle incoming logs, including long log sawing equipment. New steam feeds are to be installed on two rigs, with double cut bands. Rumors of resaws and new trimmers fill the air. Rumors have it that dry kiln section, from the green chain to the unstackers, is the next step, although no such plans have been announced yet.

"Bugs" Are Wiped Out

Through the preliminary formative periods when these various plans were developing, a new wrinkle in management has come to light. Basically, it was an expansion of the recently organized "mechanical meeting." When it was decided by the management to try to develop a new plan, all the superintendents and foremen of the departments involved were called in for a series of conferences with the management. The plans were then thrown out in the open for each man to criticize and kick around as he would deem necessary.

These meetings bring together the management, operation and construction men. The discussions clarify the problems of each one, so that everyone has a true understanding of all problems. It provides a means of co-ordinating the design, construction and operation.

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More for Less

I am very happy to be able to make the announcement of a better deal in group insurance for our employees, which appears in this issue of The Family Tree. It is especially pleasant to be able to say that our woods employees are to be included, not only because the risk is higher there, but because many of them have asked for coverage.

The policy purchased by the old Clearwater Timber Company in 1929 has grown and spread almost beyond recognition. It is now the master policy for Weyerhaeuser companies from coast to coast. It covers many thousands of employees and has paid very large sums in benefits.

Many times in the payment of benefits to families of Potlatch Forests, Inc., employees, we have found that this group insurance was the only insurance carried and thus provided the only nest egg when death occurred. So it is fitting to recall now the words of Mr. Phil Weyerhaeuser which are written into your present policy—

"We all stand together in this great manufacturing undertaking and do well to hesitate long enough to recognize our greater responsibilities at home."

C. L. BILLINGS,
General Manager.

Here's More About Change at Potlatch

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eration in such a way that a minimum of difficulty is experienced. These discussions are sometimes pretty hot, and always take many hours and, at times, several days, but always the final plan of action bears the stamp of approval of the group. Many "bugs" and errors are dug out and eliminated. The action of the group seems far superior to the work that any one man could have possibly done in trying to promote a new idea, so that it seems now that Potlatch is completely sold on the idea of group action.

The streamlining of the Potlatch plant is much too involved to possibly be presented in a single or two stories. Therefore, it is the plan to take each unit of the streamlining operation as it is put up and give its story of reconstruction and new operation. The first story would be that of the construction of the yard rough dry sheds, now practically completed.

The next items to follow will be the other phases of the yard changes, followed by a story of the reconstruction of the planing mill. As other stories follow, it is going to become evident to readers that the "streamlined" Potlatch plant is going to rate as one of the most modern and efficiently operated pine mills in the country.

The Rough Dry Sheds

In the fall of 1939, plans were laid for a general streamlining of the Potlatch lumber plant. The plant, with 33 years of operation on its shoulders, was getting badly in need of new equipment and production methods. Extensive studies of the efficiency of existing equipment revealed that new and modern methods could be applied. One of the first points of revision was in the dry lumber storage yards.

Potlatch has been penalized for a long time due to a lack of rough dry storage space, and, due to the rather expensive transportation and lumber handling systems. The key to revision lay in the recently developed lift truck unit pilers and in the older lumber carriers or "straddle bugs." The lift truck could be used in a shed that simply carried an adequate roof and had sufficient clearance to handle the lumber. This type of shed, although cheaper to build than the more ex-

pensive crane shed, serves the same purpose.

Detailed studies of the space and volume required brought out that three sheds would be required. Two of the sheds would be smaller to provide sorts for the normally low inventory items, while the third shed would be twice as large as the small sheds to handle the volume items.

Open Wall Type

Each of the small sheds that was planned had a ground dimension of 30 feet x 300 feet, with the roof placed high enough to allow four units to be stacked, making the plate of the building about 22 feet high. The third shed was twice as large, being 60 feet x 300 feet. All three buildings were primarily a roof of the required height supported by posts. There were end walls, but no side walls. To protect the sides of the piles, extension roofs of "long eaves" were used on each side of the building. Long eaves had an additional function of providing a dry space for temporary storage in transit, as well as a place in which lumber could be graded under a roof as the occasion demanded. Another very troublesome design point was cleared up by long eaves, for, if side walls were used, it would have been necessary to provide some type of door through which the lift truck could have entered with its load. These doors would be required between each pair of posts. They would have been expensive and difficult to install, slow to operate, and, no doubt, would have been an expensive item of maintenance in the future.

The 30-foot span of the two smaller sheds made it possible to use an ordinary rafter roof construction. The wall posts that carried the plate and roof were set on concrete footings. The pitch of the roof brought out an interesting point that was considered. There is often quite a heavy snowfall in Potlatch in the winter season. Snow allowed to accumulate to any depth on a roof would slide off all at once and completely block the alleys. By making the roof quite steep, the snow should slide off sooner and not accumulate to such a depth in the alleys. This would allow for the constant removal of smaller quantities of snow and would not be such an interference with the operation. Corrugated iron roofing was used, being set on wood sheathing. The iron on a one-third pitch should make a roof that would shed snow readily.

Special Truss Built

The design of the 60 feet x 300 feet shed presented a different problem. It was desirable to have 60 foot clearance between the walls without any inside posts and, yet, to have the 10 foot eave extension. This called for a truss design.

Attention was called to the newer type of wood truss that has been in use in foreign countries for several years and is now being promoted by the National Lumber Manufacturers association in the United States. The trouble with the commonly used structures in timber work was that the timber joints were always many times weaker than the heavy timbers used in between the joints. The new type of structure used what are known as "timber connectors."

The basic principle is that an iron ring is recessed between two timbers at the joints, as can be seen by the accompanying illustrations. This makes the actual joint several times stronger than the bolt joint alone. This permits the use of several small timbers in the design of a truss member, instead of a single large one, making these smaller pieces only as large as required for the strength of the member and using a sufficient number of connector rings and bolts to make the joint of the desired strength. By using small pieces, the size and weight and the entire structure is greatly reduced, and the use of large long timbers is entirely eliminated.

Each truss member is designed large enough to carry the load imposed on it, yet it is not made much larger than actually necessary, as was done in older structures. The basic steel truss designs can now be applied to wood trusses by the use of the various types of timber connectors.

The truss used in the 60 foot x 300 foot shed was known as a Fink truss with a 60-foot span. A 100-foot cantilever truss was made for the long eave. Complete drawings were made of each piece of the truss so that it was possible to make it completely on the ground before assembly. A shop was set up on the ground and the 2,600 pieces required for the trusses were pre-fabricated before any of the actual assembly started. This pre-fabrication was quite a task alone when it was considered that each piece of lumber had to be cut to size and that a total of about 10,000 holes had to be bored. The accuracy of the work done by the crew

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More Potlatch Story

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was remarkable, for there were practically none of the pieces discarded because of errors in making. After the pieces were made for the trusses and its bracing, assembly was rapidly carried forward. Each truss was bolted together on the ground and then hoisted into place by a portable boom crane. Rafters were laid and the sheathing for the corrugated iron roof was then applied.

This larger shed was a sort of proving ground for timber connector structures within Potlatch Forests, Inc. An attempt was made to collect costs on the construction so that it might be compared with other types of structures as future buildings were planned, especially when considering semi-portable wood buildings. The timber connector building appears to be much stronger and much better designed than the customary type of building. In a cost comparison between the two types of sheds as constructed here, it would indicate at this time that the timber connectors were slightly more expensive, the extra expense probably being more than justified by the advantage of a much better structure.

The entire construction was carried out with a crew that was entirely new to this type of construction. Every man is deserving of a "pat on the back" for the fine job that was turned out. Each man took hold of his job with much interest, and carried the job forward rapidly, especially when considering the size of the crew that was available for such a large job.

Idaho white pine, furnished by Potlatch Forests, Inc., adorns the walls of the state forester's office and that of his secretary, in the new state forestry building at Boise. Woods native to Idaho feature the decorative scheme of the entire building.

Mr. Billings has invited members of the executive board of the Western Pine association to hold meetings this summer at some of the plants. The hope is that the executives will meet in Lewiston as a mark of observance of the 100 years of lumbering in Idaho.

Top: Silhouetted against the sky are the girders and roof trusses of the new dress dry sheds of Potlatch. **The center view** is of the recesses and the timber connectors used in making the trusses. **Bottom picture** shows the ends of the sheds.

