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MISCELLANEOUS SERIES

INDUSTRIAL RELATIONS IN THE WEST COAST LUMBER INDUSTRY

By CLOICE R. HOWD

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PREFACE.

In an endeavor to adjust the problems of industrial relations, the West Coast lumber industry has undertaken a most important experiment in industrial democracy—the Loyal Legion of Loggers and Lumbermen. This organization grew out of a strike which was, in many ways, unique in American industrial history. This is a study of the conditions out of which it arose and of the problems it is attempting to solve.

The West Coast, the region with which this study is primarily concerned, is the name given in lumbering circles to that section of the Pacific coast where the Douglas fir is the characteristic timber tree. While the fir belt extends north into British Columbia, ordinarily the name West Coast is restricted to that portion of the belt which lies within the United States. The district comprises approximately that part of the States of Washington and Oregon lying west of the crest of the Cascade Mountains, excepting the upper Rogue River Valley in Southern Oregon, where, especially in Jackson County, the conditions more closely resemble those of the eastern part of the State. It is seldom possible to consider this district without some reference to other regions. In particular, reference must frequently be made to the conditions in the eastern part of the two States and in Idaho,[1] less often to conditions and developments in California, the Lake States, or the South.

It is a superficial and an essentially false analysis of the causes of the labor disturbances before and during 1917 to attribute them to union or radical propaganda or to the wickedness or ignorance of individual employers or employers' associations. The roots lie much deeper, in the very texture of the industry itself. The chief causes of unrest and conflict have been with regard to hours of work and, especially in the logging camps, to the living conditions. In nearly every instance each side could make out an extremely good case for itself. The employees claimed that the nature of the work in the woods and mills was such that eight hours was as long as any man should work. Many of the employers admitted this but insisted that competition with the South, where the working day was 10 or 12 hours, was so intense that a regional eight-hour day would wreck the industry on the West Coast. The employees demanded living conditions in the logging camps more nearly approaching those of the men who lived in towns. The employers agreed to the justice of the demands in principle, but argued that it would mean financial ruin to spend anything more on camps which, at best, were only temporary, and, also, that the men would not keep a camp decent no matter how well it had been prepared for them.

In order to get behind these seemingly irreconcilable differences, it has been necessary to examine the industry itself, particularly the financial conditions and the kind of work the men do. The method of presentation has been determined by this consideration. As a

[1] This section east of the Cascades is usually called the "Inland Empire."

background for the study, Chapter I shows how the shifting of lumber production in the United States has made possible the development of a great lumber industry on the West Coast. The record of this development is presented in Chapter II. An analysis of the internal financial organization of the industry is made in Chapter III, in an endeavor to discover the ability of the employers to grant the reasonable demands of the workers. In Chapter IV the technology of the industry is examined in order to see what demands it makes upon the employees. The next chapter, V, discusses the hours, rates of wages, and working and living conditions, and diagnoses the actual situation against which the men have been protesting. Chapter VI is a study of the various types of employee psychology, as those types have developed in the environment furnished by the lumber industry in this region. Chapters VII to XII give a history of the various organized or articulate protests of the employees and the reactions of the employers. In the final chapter an estimate of the significance and worth of the various efforts discussed in the six preceding chapters is attempted.

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CHAPTER I.—MIGRATIONS OF THE LUMBER INDUSTRY IN THE UNITED STATES.

ATLANTIC COAST.

The lumber industry in the United States, like many of its workers, has been migratory, and the causes for the migration of both have been much the same. Neither has made adequate provision for the future; both have enjoyed the present with little thought of to-morrow. When the settlement of North America began, the pioneers found the country covered with immense forests. North of Chesapeake Bay the timber was largely white pine and hardwood, with much spruce and hemlock, but only the pine and the best of the oak were thought to be worth anything. The white pine was the king of the forests, and in all the country there was no tree which could compare with it in size or usefulness. Growing straight and tall, the "pumpkin pine," as the largest were called, sometimes reached a diameter of 7 feet and a height of 250 feet, although the usual size of mature trees was about 4 to 6 feet in diameter and 150 feet tall. These trees were fit for masts for the "king's navy," a use to which many of them were put.[1]

The export of lumber from the United States began in 1608, when a cargo of sawn boards was shipped from Jamestown to England. This lumber was whip or pit sawn; that is, it was sawn into boards with a straight saw worked by two men. The top sawyer stood on the log, which had been hewn flat on both top and bottom, and guided the saw along a chalk mark, while the pit sawyer was underneath the log, often in a pit, and furnished a large part of the cutting power.[2] But this method of sawing lumber was too slow to suit the colonists, and a few years later they were building sawmills. We are not certain when or where the first sawmill in the United States was built. New York claims the honor for three mills built there by the Dutch in 1623, while York, Me., claims that a mill was built there in that year. These records are somewhat uncertain, but there is good evidence that a sawmill was built at South Berwick, Me., in 1631 or 1632. From that date until the present sawmilling has been one of the first indus-

[1] U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F Fox, pp. 8-10; U. S. Forest Service Bul. No. 99, Uses of the commercial woods in the United States: Pines, by W. L. Hall and Hu Maxwell, p. 35; History of the lumber industry in America, by J. E. Defebaugh, Chicago, 1906, vol. 1, pp. 301-303.

[2] Economic history of the United States, by T. W Van Metre, N. Y., 1921, p. 58; U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F. Fox, p. 12.

tries to be established in each new community in the United States, except, of course, in those places so unfortunate as to have no forests.[3]

Unfortunately, we do not know exactly how these early sawmills were built. They were usually run by water power. One of the earliest types of saw recorded was a straight saw about 6 feet long, with the lower end attached to a rod connected with a crank on the water-wheel shaft. This was the prototype of the kind of power transmission now used on the gang saw. The upper end of the saw was fastened to a spring pole which kept the saw taut on the upward stroke. The saw was the only piece of machinery in the mill, and the log was moved against it by hand. The next development came when the saw was set in a frame or sash where it was held taut while the frame moved up and down on the same principle as the modern gang saw. The gang saw had its inception when it was found that where sufficient power was available several saws could be set in the same frame, with a corresponding increase in cutting speed. Later it was found that by using a very heavy and stiff saw and placing guide blocks along it the frame could be dispensed with and greater speed attained. This was called a "muley" saw. It was said of the sash saw that it "went up to-day and down to-morrow," but even then it cut twice as fast as the spring-pole saw. The muley saw had a cutting speed at least twice as great as the sash saw, and for many years was able to hold its place beside the circular saw. The sash-saw mills could cut 1,000 or 2,000 board feet of lumber per day, and in exceptional cases as much as 3,000 feet.[4]

Logging was very primitive. Felling and bucking (cutting into log lengths) were both done with the ax, which had but a single bit. The logs were usually snaked to the mills; less often, they were rolled. Of course, with such methods of transport, logs were not moved far, and nothing but the best was used.[5] It was long afterwards that water transport was begun.

As early as 1650 many people in New England had begun to fear that the forests would soon be gone, and steps were taken to protect them. Years later Joshua McGee set these fears at rest by assuring the fearful that America's forests extended along the coast for 300 or 400 miles and inland for about 15 miles. With this assurance of a perpetual supply of timber, lumbering once more went merrily on.[6] Before 1750 most of the lumber used in the colonies was cut near where it was used. It was easier to move the mill than to haul lumber or timber, and water power was usually present wherever lumber was needed. There was, however, a considerable amount of lumber exported, particularly from Maine. By the close of the Revolutionary War the growth of the larger towns had developed markets which had exhausted the near-by timber, and lumber was often brought long distances by water. Lumber for New York City came from the Hudson River Valley. It was rafted down the river to Albany and shipped from there by boat to New York.

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[3] History of the lumber industry in America, by J. E. Defebaugh, Chicago, 1906, vol. 2, pp. 6–8; U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F. Fox, p. 11 et seq.

[4] U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F. Fox, pp. 13, 22; History of the lumber industry in America, by J. E. Defebaugh, Chicago, 1906, vol. 2, p. 7 et seq.; "Saws," by R. Grimshaw, in Journal of Franklin Institute, January, 1880, pp. 25–41; "American machinery for sawings logs," by J. Richards, in Engineering Magazine, March, 1899, pp. 932–946.

[5] U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F Fox, pp. 15, 18, 22.

[6] Idem, p. 37.

Philadelphia and the cities of Chesapeake Bay received lumber rafted down the rivers from Pennsylvania and southern New York. It was easier to raft the lumber to market than to float the logs down the river and saw them where the lumber was needed.[7]

Near the close of the eighteenth century settlement began west of the Appalachian Mountains and the sawmill was not long in following. By 1805 there were many mills in the western part of New York. These mills rafted their lumber down the Allegheny, Ohio, and Mississippi Rivers to New Orleans. There was still plenty of timber in the East, and lumber was cut in the West purely for local use. Down the Allegheny and the Ohio Rivers moved the mills, following closely the hunter and the trapper, until by 1820 the sound of the sawmill was familiar throughout the Ohio Valley. A little later settlements on the Great Lakes made possible the beginning of lumber production in the pine forests, and it was not long until western lumber began to enter the eastern markets. When the first shipment of Michigan pine was able to compete with New York pine in New York City a new era had opened in the lumber industry.[8]

GREAT LAKES STATES.

By 1865 the timber of the Atlantic coast was so far exhausted that lumber could no longer be supplied in the required amounts. The price accordingly increased until it was possible to meet the demand by shipping lumber from Michigan. While such shipments began before 1850, it was not until after 1860 that they became important. During the decade 1860–1870 the production of lumber in Michigan increased so rapidly that that State rose from third to first place as a lumber producer in the United States, crowding Pennsylvania and New York from first and second places into second and third.[9]

It took a generation for the lumber industry to get well started in the Lake States and to develop the machinery to reap properly the harvest which nature had provided in the immense white-pine forests of the region. By 1865 the circular and gang saws had been brought to a high degree of efficiency, while steam was available for all the power requirements of the mills. In the logging camps steam skidding was unknown and the logging railroad was just coming into use. However, the lack was not felt, as logs could readily be hauled to the streams and then driven (floated) to the mills. Railroads and lake steamers were ready to carry the lumber to every part of the country where a rapidly growing population and developing industry were demanding lumber in ever increasing quantities. Between 1865 and 1905 the lumbermen swept across Michigan, Wisconsin, and Minnesota like a whirlwind, laying waste with ax and fire that mighty pine forest, until by 1905 all that remained were small fragments of the original forests and hundreds of miles of stumps. Little thought was taken of to-morrow and conservation was scarcely dreamed of. The lumbermen were prodigal of timber in the woods and mills, while fire was permitted

[7] U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F. Fox, pp. 17-19.

[8] History of the lumber industry in America, by J. E. Defebaugh, Chicago, 1906, vol. 1, p. 312; U. S. Forest Service Bul. No. 34, History of the lumber industry in the State of New York, by Wm. F. Fox, p. 18; U. S. Forest Service Bul. No. 99, Uses of the commercial woods in the United States: Pines, by W. L. Hall and Hu Maxwell, p. 39.

[9] Le Bow's Review, New Orleans, May, 1853, p. 502. See Table 1.

to run through hundreds of miles of virgin forests. By 1910 the forests were so far gone that the Lake States ceased to be the center of the lumber industry. During the decade 1899 to 1909, the three States dropped from the rank of first, second, and third to eighth, tenth, and twelfth, while white pine ceased to govern the lumber markets. Now that each State has begun to import much of the lumber needed, the lumbermen are becoming more conservative and timber is being carefully guarded.[10]

SOUTH ATLANTIC AND GULF COASTS.

The lessened volume of production in the Lake States after about 1900 caused another increase in lumber prices. This stimulated the development of the industry in the South, along the South Atlantic and Gulf coasts. While there had been cutting for local needs there since the seventeenth century, it was not until after 1890 that southern yellow-pine lumber became an important factor in the lumber markets of the country. As late as 1880 nearly all the timber cut in the whole region was cut near the Atlantic coast. In 1879 the whole South cut only a little more timber than Pennsylvania and about half as much as Michigan. Since then the industry there has expanded rapidly until at present nearly half of the lumber manufactured in the United States is sawn south of the Mason and Dixon Line. Yellow pine has been king for two decades and now furnishes nearly two-fifths of the lumber used in the country.[11]

WEST COAST.

The increase in lumber prices about 1900 also stimulated the development of the lumber industry on the West Coast. As the price of Minnesota white pine increased, the region in which fir could compete with it broadened. Gradually the Dakotas and Nebraska began to look to the West Coast for lumber. With the further depletion of the Lake forests the market areas widened, while the more recent diminution in the supply of southern pine caused another expansion of markets for western lumber.

LUMBER PRODUCTION AND TIMBER RESOURCES.

Tables 1, 2, and 3,[12] give a synoptical view of the movements of the lumber industry in the United States since 1849. The regions referred to in Tables 2 and 3 are as follows: Northeastern States: New England, New York, New Jersey, Pennsylvania, Delaware, and Maryland; Central States: Ohio, Indiana, Illinois, Missouri, West Virginia, Kentucky, and Tennessee; Lake States: Michigan, Wisconsin, and Minnesota; Southern States: Virginia, the Carolinas, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Texas, and Oklahoma; Pacific States: Washington, Oregon, California, and Nevada; Rocky Mountain States: Idaho, Montana, Wyoming, Colorado, Utah, Arizona, and New Mexico; Other States: Iowa, Kansas, Nebraska, the Dakotas, and District of Columbia.

[10] See Tables 2 and 3.
[11] See Table 3.
[12] U. S. Department of Agriculture Bul. No. 845, Production of lumber, lath, and shingles in 1918, p. 15; U. S. Bureau of the Census, Census of 1920, Lumber, lath, and shingles, p. 4.

TABLE 1.—CHIEF LUMBER PRODUCING STATES IN EACH CENSUS YEAR 1849 TO 1919.

Year.	Rank in production of lumber.		
	First.	Second.	Third.
1849	New York	Pennsylvania	Maine.
1859	Pennsylvania	New York	Michigan.
1869	Michigan	Pennsylvania	New York.
1879	do	do	Wisconsin.
1889	do	Wisconsin	Pennsylvania.
1899	Wisconsin	Michigan	Minnesota.
1909	Washington	Louisiana	Mississippi.
1919	do	do	Oregon.

TABLE 2.—MILLION BOARD FEET OF LUMBER CUT IN SPECIFIED REGIONS OF THE UNITED STATES IN EACH CENSUS YEAR, 1849 TO 1919.

Region.	1849 [1]	1859 [1]	1869	1879	1889	1899	1909	1919
Northeastern States	2,740	2,960	4,557	4,642	4,726	5,709	5,197	2,584
Central States	930	1,688	2,284	3,349	3,130	5,643	5,487	3,016
Lake States	315	1,088	3,592	6,279	8,251	8,750	5,476	2,692
Southern States	680	1,424	1,288	2,498	4,846	11,116	19,973	16,078
Pacific States	295	512	558	664	2,028	2,901	6,906	8,818
Rocky Mountain States	.....	8	59	154	249	556	1,292	1,299
Other States	40	320	417	505	612	402	179	65
Total	5,000	8,000	12,755	18,091	23,842	35,077	44,510	34,552

[1] The figures for total volume of lumber cut in 1849 and 1859 are estimates by R. S. Kellogg, in "Lumber production of the United States," in Proceedings of the Eighth Annual Convention of the National Lumber Manufacturers' Association, 1910, p. 96. The figures for cut by regions were computed on the basis of the proportion shown in Table 3 and on the value of cut rather than on volume as for the years 1869 to 1919.

TABLE 3.—PER CENT OF LUMBER CUT IN SPECIFIED REGIONS OF THE UNITED STATES IN EACH CENSUS YEAR, 1849 TO 1919.

Region.	1849	1859	1869	1879	1889	1899	1909	1919
Northeastern States	54.8	37.0	35.7	25.8	19.8	16.3	11.7	7.5
Central States	18.6	21.1	17.9	18.4	13.1	16.1	12.3	8.7
Lake States	6.3	13.6	28.2	34.7	34.6	24.9	12.3	7.8
Southern States	13.6	17.8	10.1	13.8	20.3	31.7	44.9	46.6
Pacific States	5.9	6.4	4.4	3.6	8.5	8.3	15.5	25.5
Rocky Mountain States	.....	.1	.5	.9	1.1	1.6	2.9	3.8
Other States	.8	4.0	3.3	2.8	2.6	1.1	.4	.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

An examination of Tables 2 and 3 shows that while the proportion of lumber cut in the older regions has declined, there has been until very recently a continuous increase in the amount cut in those regions. During the past decade, however, there has been a definite falling off in actual cut in every region east of the Rocky Mountains. The rapid depletion of eastern forests means that more and more the country must depend upon the forests of the West for its lumber. Table 4 shows the original and present stands of timber in each forest region of the country.

TABLE 4.—ORIGINAL AND PRESENT STANDS OF TIMBER IN SPECIFIED REGIONS OF THE UNITED STATES.[1]

Region.	Original stand.	Present stand.[2]
	Million board feet.	*Million board feet.*
Northeastern and Lake States	1,000,000	204,766
Central States	1,400,000	144,470
Southern States	1,000,000	501,485
Rocky Mountain States	400,000	223,141
Pacific States	1,400,000	1,141,031
Total	5,200,000	2,214,893

[1] U. S. Forest Service, Circular No. 166, Timber supply of the United States by R. S. Kellogg, pp. 3–5, and Timber depletion, lumber prices, lumber exports, and concentration of timber ownership, Washington, 1920, p. 34.
[2] Much of the present stand, particularly in the Eastern States, is second-growth timber and inferior in quality to the original stand.

At the present time the United States is consuming about 56,000,000,000 feet of saw timber (timber which could be sawn into lumber) annually, although only about 35,000,000,000 feet are actually cut into lumber. Of this amount about 40,000,000,000 feet comes from virgin stands and 16,000,000,000 feet from stands of immature and second-growth timber. To offset this enormous drain we are growing only about 10,000,000,000 feet annually, and this is usually much inferior in grade to the virgin timber. Table 5 shows the relation in 1919 between the cutting of timber for lumber and timber growth in the various sections of the country, but takes no account of timber used other than for lumber.

TABLE 5.—LUMBER CUT AND TIMBER GROWTH IN SPECIFIED REGIONS, 1919.[1]

Region.	Lumber cut.	Growth of saw timber.
	Board feet.	*Board feet.*
Northeastern States	2,583,873,000	1,323,000,000
Central States	3,015,887,000	1,458,000,000
Lake States	2,691,868,000	988,000,000
Southern States	16,078,635,000	4,180,000,000
Pacific States	8,818,321,000	1,262,000,000
Rocky Mountain States	1,298,684,000	461,000,000
Other States	64,808,000	.....
Total	34,552,076,000	9,672,000,000

[1] U. S. Bureau of the Census, Census of 1920, Lumber, lath and shingles, p. 4; U. S. Forest Service, Timber depletion, lumber prices, lumber exports, and concentration of timber ownership, Washington, 1920, pp. 37, 38.

LUMBER PRICES.

Since about 1860 there has been a marked tendency for lumber prices to advance more rapidly than general prices.

This is shown in Table 6, which gives index numbers of wholesale prices of all commodities and of lumber from 1860 to 1918, the average for the years 1901–1903 being taken as the base. The index numbers in the second column are for the money price of lumber throughout the period, while those in the third column show the trend of the real price of lumber when exchanged for all commodities.

TABLE 6.—INDEX NUMBERS OF WHOLESALE PRICES OF LUMBER AND OF ALL COMMODITIES, BY YEARS, 1860 TO 1918.[1]

[1901-1903=100.]

Year.	All commodities.	Lumber.		Year.	All commodities.	Lumber.	
		Money price.	Real price.			Money price.	Real price.
1860	106	41	39	1890	98	77	79
1861	106	45	43	1891	96	76	79
1862	124	50	40	1892	90	77	85
1863	157	68	43	1893	93	75	81
1864	201	87	43	1894	83	71	85
1865	229	88	38	1895	84	69	81
1866	202	99	49	1896	81	70	86
1867	182	90	50	1897	81	68	84
1868	171	81	48	1898	84	73	86
1869	163	82	51	1899	90	82	91
1870	151	84	56	1900	98	91	93
1871	143	88	61	1901	95	91	96
1872	147	97	66	1902	101	102	100
1873	146	95	65	1903	104	107	103
1874	141	82	58	1904	104	101	97
1875	135	74	55	1905	104	111	108
1876	125	69	55	1906	107	136	127
1877	117	72	61	1907	113	145	128
1878	107	71	66	1908	108	118	109
1879	102	67	65	1909	117	128	109
1880	113	75	66	1910	122	131	108
1881	112	75	67	1911	112	131	117
1882	115	79	69	1912	119	139	116
1883	112	88	79	1913	121	142	117
1884	105	80	76	1914	118	135	114
1885	99	78	79	1915	122	130	107
1886	98	77	79	1916	153	150	98
1887	98	80	82	1917	213	201	94
1888	100	80	80	1918	234	237	102
1889	100	79	79				

[1] Index numbers of lumber prices have been computed from those given in The Organization of the Lumber Industry, by W. Compton, Chicago, 1916, p. 149, and Prices of Lumber, by R. C. Bryant, War Industries Board Price Bulletin No. 43, p. 83. Index numbers of prices of all commodities have been computed from those given in U. S. Bureau of Labor Statistics Bul. No. 284, Index numbers of Wholesale prices in the United States and foreign countries, p. 158, and Bul. No. 320, Wholesale prices, 1890 to 1921, p. 15; the figures for 1860 to 1889 are unweighted, while those for the later years are the regular weighted series of the bureau.

The price of lumber may be considered in two ways. First, the price of lumber in money, and second and more important, the real price of lumber, or its value as measured by the price of other commodities.

When the price of commodities as a whole is high and the price of lumber is low the purchasing power of lumber when exchanged for all commodities is low.

In 1860 the price of all commodities was a little higher than the average for the period 1901–1903, the index number, as shown in Table 6, being 105. The index number of the money price of lumber, however, was only 41; therefore the value of lumber was low as compared with the value of all commodities. The ratio was 41:106. In other words, accepting the price of all commodities in that year as 100, lumber stood far below, the relative price being only 39.

The next year the money price of lumber advanced slightly, the index number being 45, while the price of all commodities remained the same, so that the price of lumber as measured by the price of all commodities stood at 43. Following this index or ratio of the price of lumber to all commodities through the entire period shown in the table, it is seen that the real price of lumber as measured by what it was worth when exchanged for all commodities advanced fairly steadily throughout the period, though there were minor variations

from year to year and very material variations at a few places in the period. Thus the trend of the real value of lumber when exchanged for all commodities, as well as the money price of lumber, has been decidedly upward. This may be seen more clearly in chart 1.

CONSERVATION AND REFORESTATION.

The increasingly higher prices of lumber have exerted a considerable check upon the consumption of timber products, with noticeable increase in the use of wood substitutes until to-day less lumber is being used in the United States than 20 years ago.

The production of lumber in 1899 was greater than in 1919, while the average production for the five-year period 1908 to 1912 was more than one-third larger than for a corresponding period 10 years later, 1918 to 1922, falling from an average of forty-four billion feet per year to thirty-two billion feet per year.[13] High prices have also checked a considerable amount of the timber waste which has always characterized lumbering when prices have been low. In 1880 the Census Bureau reported that the Washington logger would not log timber where he could not get 30,000 feet to the acre, and that trees must cut three logs 24 feet long and 30 inches in diameter. Stumps were often cut 20 feet high, while 40 or 50 feet of the top of the tree were wasted. Timber more than 2 miles from water which would float it was not touched.[14]

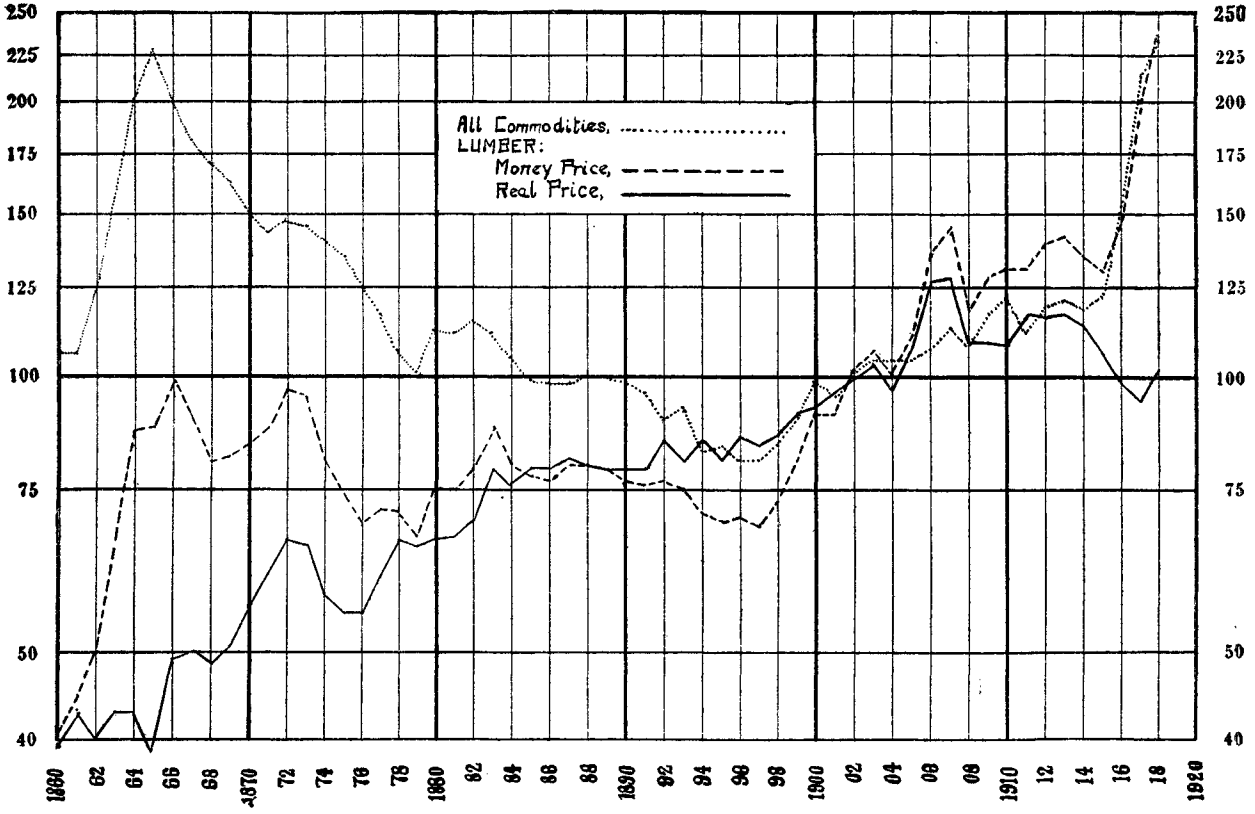
In 1911 the Forest Service reported that "more timber is left on the ground in Washington than constitutes the virgin stand in the Lake States or southern pineries."[15] With better prices comes closer utilization of timber. In the Lake States white pine is cut to a 4-inch top and 6 feet long. In Idaho the Forest Service utilizes logs to a 6-inch top and 8 feet long.[16] The closest logging practice found on the West Coast, and this is a very unusual case, was the cutting of logs to a 6-inch top and 12 feet long.

In the sawmill there is a large amount of waste. Part of the waste, including slabs, edgings, trimmings, sawdust, and unsound portions of the logs, is unavoidable, but there is also much unnecessary waste, due to careless sawing and handling, use of poor saws and planer knives, failure to utilize small pieces, and the trade practice of requiring that all lumber be cut to lengths which are multiples of 2 feet. In some mills, lath machines or box factories utilize much that would otherwise be wasted, and other mills find a market for much of the slabs and trimmings for fuel, while most mills burn a large part of the sawdust and other waste under the boilers. Yet the fires constantly burning in the great burners beside nearly every West Coast mill speak eloquently of the large amount of wood for which no market exists.

In spite of all efforts to conserve timber, it is becoming necessary to reforest as timber is used. The Forest Service estimates that the country can grow over 25,000,000,000 cubic feet of wood annually, and use for it nothing but land unsuited for other purposes. From

[13] See Table 2; "The lumber situation," by F. H. Smith, in Special bulletin of the Bankers' Statistics Corporation, N. Y., Nov. 2, 1920; Four L Bulletin, February, 1923, p. 11.
[14] U. S. Census Bureau. Census of 1880: Forest trees of North America, p. 574.
[15] U. S. Forest Service Bul. No. 89: The Olympic National Forest, by Findlay Burns, p. 16.
[16] Mason, T. D.: Timber Ownership and Lumber Production in the Inland Empire. Portland, Oreg., 1920, p. 23 et seq.

CHART 1.—TREND OF WHOLESALE PRICES OF ALL COMMODITIES AND OF LUMBER, 1860 TO 1918.



these 25,000,000,000 cubic feet of timber could be cut over 70,000,000,000 board feet of lumber, an amount more than twice our present consumption.[17] The initial cost of reforestation, whether by permitting the natural growth or by replanting, is not large. It is the cost of carrying the crop and caring for it until it is ready to harvest, which becomes serious. With taxes, protection, and interest the load becomes heavy by the end of the century. Yet it has been shown that the probable return on such a crop at the end of a century will yield a profit. Douglas fir at 100 years of age will produce 50,000 to 100,000 feet of lumber per acre, and a large amount of the lumber will be clear.[18] Prof. B. P. Kirkland, of the University of Washington Forestry School, holds that reforestation would usually be impracticable for owners of small tracts of timber, although it would be profitable for certain classes of owners, particularly the United States, the States, very large private owners, farm wood lots, and medium-sized private holdings in the northeastern part of the country. Usually reforestation requires a strong financial position and access to cheap capital.[19]

While reforestation is just beginning in the United States, there is every indication that it will soon become an important factor in the supply of timber. The United States Forest Service now insists that public timberlands must be restocked as cut, in order to insure continuous production. In some parts of the country lumber companies are reforesting as they cut their timber, but the practice is rare, probably nonexistant on the West Coast. Owing to the present condition of the forests in the various parts of the country, it does not appear likely that reforestation will ever reach the place where the eastern or Lake forests will supply the needs of the tributary regions. With care the South need never import lumber, although it may not have much to spare after another generation. But on the West Coast, if the forests are managed properly, the lumber industry should be able to continue indefinitely on a scale considerably in excess of the present rate of cutting. There is now a supply of timber sufficient for a century at the present rate of use, and with care an equal amount could be grown before the present supply is exhausted. While the industry on the West Coast will have its ups and downs, the ups will come more and more to predominate, and the industry there should continue to expand indefinitely.

[17] U. S. Forest Service: Timber depletion, lumber prices, lumber exports, and concentration of timber ownership. Washington, 1920, p. 39.
[18] U. S. Forest Service Circular 175: Growth and management of Douglas fir in the Pacific Northwest, by T. T. Munger, pp. 9, 16–24.
[19] West Coast Lumberman, July 15, 1918, p. 32, "Reforestation."

CHAPTER II.—DEVELOPMENT OF THE LUMBER INDUSTRY ON THE WEST COAST.

EARLY SAWMILLS.

The building of a trading post at Astoria in 1811 by John Jacob Astor marked the beginning of the economic development of the West Coast. It was not, however, until the establishment of the Hudson Bay Co.'s post at Fort Vancouver (now Vancouver, Wash.), in 1824–25 that a permanent settlement was made. The control of the country by the fur traders was not disputed until after 1840, although a few pioneers had built homes in the Willamette Valley before 1835. The Oregon migrations really began in 1843 when 900 people came overland to Oregon. The next year 1,400 arrived, and by the close of 1845 the population exceeded 6,000. Throughout the West Coast region the towns grew up about the sawmills or, in a few cases, about grist mills, Vancouver being the only notable exception.[1]

The earliest traders and settlers built their trading posts or homes of round and hewn timbers, rived boards, and some pit-sawn lumber, but it was not long before better materials were available. During the winter of 1827–28 the first sawmill on the Pacific coast was built by the Hudson Bay Co. It was built on a small stream which entered the Columbia River from the north about 6 miles east of Fort Vancouver.[2] A quotation from an early visitor to the mill is of interest:

> The sawmill is a scene of constant toil. Thirty or forty Sandwich Islanders are felling pines and dragging them to the mill; sets of hands are plying two gangs of saws by night and day. Three thousand feet of lumber per day, nine hundred thousand feet per annum, are constantly being shipped to foreign lands.[3]

Most of the lumber was shipped to the Sandwich (Hawaiian) Islands where it brought from $55 to $80 per thousand feet.[4] The second sawmill on the West Coast was built at Newberg, Oreg., in 1837 or 1838. After a few years' operation it was swept away by high water in the winter of 1840–41.[5] The third mill in this region was erected by the Methodist Mission at Salem, Oreg., about 1840.[6]

The first mills in Oregon to cut for more than a purely local market were built at Oregon City in 1842–43. In October, 1842, a milling company composed of citizens of the United States built a sawmill on an island in the Willamette River a short distance below the falls. Almost immediately the Hudson Bay Co. built a mill on the river bank near the island. The total cost of the Hudson Bay Co. mill was $2,300, of which $800 was for machinery which included a power planer.[7] The first record of lumber shipments from the West Coast to California was in 1847: "The pine lumber brought down has sold for $50 per thousand feet and is still in demand, the shingles

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[1] American Historical Association Report, 1909, pp. 165–172. "Early towns of the Pacific Northwest," by E. S. Meany.
[2] The Timberman, January, 1906, p. 28.
[3] Farnam, Thomas J.: Journal of Travels in the Great Western Prairies in 1839. New York, 1843, p. 65.
[4] U S. Congress, House of Representatives, Committee on Foreign Affairs. Report on Territory of Oregon, January 4, 1839, p. 12.
[5] History of Oregon, by H. H. Bancroft, San Francisco, 1886, vol. 1, p. 151; The Timberman, January, 1902, p. 25.
[6] History of Oregon, by Rev. Gustavus Hines, Auburn, N. Y., 1851, p. 95.
[7] History of Oregon, by H. H. Bancroft, vol. 1, p. 207; Oregon Historical Society Quarterly, March, 1913, p. 68.

$5 per thousand."[8] After the settlement of the boundary dispute in 1846 Oregon was rapidly settled and saw and grist mills, separately or in combination, were built in considerable numbers. In 1849 there were 30 sawmills in Oregon and the lumber cut in the Territory was valued at $1,355,500.[9]

The Fort Vancouver mill was the only sawmill in western Washington before 1847. In that year a milling company was organized which built a sawmill and a grist mill at Tumwater, at the head of Puget Sound. The second sawmill on the Sound was built in 1851 not far from Tumwater. Both mills were of the sash-saw type and were run by water power.[10] The first lumber shipped from Puget Sound to California was undoubtedly carried by the brig *Sacramento*, which, in March, 1850, loaded a cargo of lumber, shingles, and piles at Nisqually. The lumber was cut in the Tumwater mill; the shingles were made by hand.[11]

Except on the Willamette and lower Columbia Rivers there was but little development of the lumber industry on the West Coast until 1853, but in that year mills were erected at many other points. In March a steam mill at Seattle began cutting lumber, and before the year was over other mills were in operation on Puget Sound at Alki Point, Port Ludlow, and Appletree Cove.[12] During the same year mills were in operation along the Washington coast on Willapa Harbor, Grays Harbor, and Bakers Bay, and along the Oregon coast at Port Orford and Astoria, and probably on Coos Bay.[13] The building of sawmills went on rapidly during 1854 and 1855. On October 1, 1855, Maj. H. A. Goldsworth, of the United States Coast Survey office, reported that there were then 16 sawmills on Puget Sound with a combined capacity of 85,000 feet per day. There were four mills near Olympia, two at Nisqually, two at Port Ludlow, and one each at Henderson Inlet, Hammersley Inlet, Steilacoom, Puyallup, Seattle, Port Orchard, Port Gamble, and Bellingham Bay.[14] By 1857 there were 37 mills in Washington. The largest of these was the mill at Port Gamble, with a capacity of 20,000 feet per day, which began cutting on January 31, 1854, and before the end of the year had shipped 3,675,000 feet of lumber.[15]

FIRST SURVEY OF LUMBER INDUSTRY.

The first systematic survey of the lumber industry on the West Coast was that undertaken by the Census Bureau, in the census of 1860, which compiled statistics of the industry by counties. The data are presented in Table 7.

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[8] Spectator, Oregon City, Oreg., June 10, 1847.

[9] Spectator, Oregon City, Oreg., Feb. 22, 1849; U. S. Census Bureau, Census of 1900, Manufactures, "The lumber industry." Oregon at this time included what is now Oregon, Washington, Idaho, and parts of Montana and Wyoming.

[10] Bagley, C. B.: Interview, June, 1922. (Mr. Bagley was an early settler on Puget Sound, where he published a paper for many years; he is exceptionally well informed on early Puget Sound history.)

[11] Bagley, C. B.: In the Beginning, Seattle, 1905.

[12] Report of Superintendent of United States Coast Survey for 1856, p. 293, Washington, 1856. Pioneer and Democrat, Olympia, Apr. 15, 1854; Seattle Times, Feb. 7, 1904, sec. 2, p. 7; Columbian, Olympia, Wash., Oct. 15, 1853.

[13] Columbian, Olympia, Wash., Oct. 8, and Nov. 12, 1853; The Northwest Coast, by James G. Swan, New York, 1857, pp. 65, 219, 238, 364.

[14] Report of Superintendent of United States Coast Survey for 1856, p. 293, Washington, 1856.

[15] The Northwest Coast, by James G. Swan, New York, 1857, p. 399; Seattle Times, Feb. 7, 1904, sec. 2, p. 7; Pioneer and Democrat, Olympia, Wash., Feb. 17, 1855.

TABLE 7.—STATISTICS OF THE LUMBER INDUSTRY IN OREGON AND WASHINGTON IN 1859, BY COUNTIES.[1]

OREGON.

County.	Number of establishments.	Capital invested.	Average number of workers.	Total wages.	Value of—	
					Raw materials used.	Manufactured products.
Benton	12	$29,000	26	$17,028	$12,925	$41,400
Clackamas	14	44,400	31	14,760	15,200	49,600
Clatsop	2	9,000	25	8,280	8,500	17,800
Columbia	6	18,600	15	8,664	7,275	24,000
Jackson	10	36,600	22	17,460	17,963	55,325
Josephine	5	24,500	41	26,340	11,800	50,500
Lane	4	9,700	19	10,920	6,582	25,488
Linn	6	15,500	12	3,240	7,100	25,200
Marion	24	71,400	73	36,780	34,693	109,387
Multnomah	3	72,000	29	22,980	41,900	182,500
Polk	9	42,400	26	15,120	9,035	49,200
Umpqua (Coos)	2	3,000	6	3,060	900	4,500
Wasco	6	8,000	17	9,600	6,400	19,200
Washington	14	30,700	16	6,240	4,702	16,200
Yamhill	9	15,600	20	9,840	4,950	19,708
Total	126	430,400	378	210,312	189,925	690,008

WASHINGTON.

Clarke	4	$18,000	10	$5,130	$5,650	$24,100
Cowlitz	1	40,000	25	15,600	16,000	48,000
Island	1	35,000	63	37,500	30,000	75,000
Jefferson	2	128,000	108	59,400	65,000	154,000
King	1	20,000	20	9,600	15,000	36,000
Kitsap	4	755,000	348	209,700	237,000	694,000
Lewis	2	5,000	4	1,680	900	2,800
Pacific	2	5,500	7	5,040	2,826	8,720
Pierce	3	48,000	13	5,640	4,325	10,380
Skamania	1	4,000	4	2,880	1,600	8,000
Mason	2	13,500	6	4,200	5,000	15,000
Thurston	5	44,000	18	9,120	16,100	43,800
Whatcom	1	30,000	3	1,800	8,000	17,000
East Washington	3	20,000	16	12,000	10,500	35,720
Total	32	1,166,000	645	379,290	417,901	1,172,520

[1] U. S. Census Bureau, Census of 1860: Manufactures of the United States in 1860, pp. 489–491, 671 et seq.

The mills in Jackson and Wasco Counties in Oregon and the east Washington mills were outside of the West Coast region, with which we are here concerned. It will be noticed that the lumber industry was concentrated in Kitsap County, Wash., which produced more lumber than the remainder of Washington or all of Oregon. The four mills probably were at Port Gamble, Port Madison, Port Blakeley, and Port Orchard. There were also large mills at Port Ludlow in Jefferson County and at Portland in Multonomah County, Oreg., but the Port Gamble and Port Madison mills were easily the largest on the West Coast.

TYPES AND EQUIPMENT OF SAWMILLS.

The earliest sawmills on the West Coast were very much like the seventeenth and eighteenth century mills in the East. Water power was general and the sash saw was the usual equipment, but it was not long before better machinery was available. In 1846 an Oregon City mill was running a circular saw; in 1854 gang saws, planers, and lath machines were in use; and in 1861 the muley saw was in operation. Records do not enable us to tell how much earlier these

machines were used. The first steam mill was built at Portland in 1850, and after 1853 all the large mills were steam mills.[16] The use of steam power made it possible to build larger mills, and by 1870 the Port Gamble and Port Madison mills each cut 100,000 feet of lumber per day. The equipment of these mills was much like that of some of the older mills now in operation in this region—circular head saws, gang edger, power log turners and carriage drives. Live rolls, band saws, automatic trimmers, slashers, and slab conveyors do not seem to have been in use.[17] By 1880 the larger mills were cutting up to 200,000 feet per day each, and were beginning to introduce most of the major modern improvements, excepting band saws, automatic trimmers, and electric power, which did not come until about 1900.[18]

It was not until about 1880 that the crosscut saw was perfected to the point where it was available for felling timber. Bucking, or cutting the fallen tree into log lengths, was done with the saw, but it was a two-man job. During most of the time before 1880 logs were hauled to some stream or bay by oxen, and then floated to the mill. The logs were hauled over a "skid road," made by placing skids at right angles to the line of haul and about 8 feet apart. The center of the skid was notched to keep the log in the center of the road. To make hauling easier the skids were greased, at first with dogfish oil and later with tallow. Teams of 6 to 12 oxen would haul from 1 to 10 or more logs over such a road. About 1880 horses began to displace oxen on the skid road, and by 1890 the donkey engine had begun to supplant both oxen and horses.[19]

PRODUCTION OF LUMBER, 1859 TO 1869.

During the decade 1859 to 1869 there was little expansion of the lumber industry on the West Coast. Many of the existing mills were overhauled and enlarged, but few additional mills were erected. Kitsap County continued to be the center of the industry, although Port Ludlow, Utsaladdy, and Seattle became important lumber towns. The total production in the territory of rough lumber was valued at $1,307,585, and of dressed lumber at $616,100. Of this total, rough lumber of the value of $1,090,000 and dressed lumber of the value of $605,000 were cut in the eight mills in these places. In Oregon the outstanding feature of the development was the erection of three large mills on Coos Bay, which in 1869 cut rough lumber valued at about $180,000, almost exactly the same value as the lumber production of Portland. Of the $1,014,211 worth of rough lumber cut in the State in 1869, about one-half was cut in 26 mills on Coos Bay, in Portland and in Columbia and Linn Counties. The total dressed lumber production of the State was valued at $57,850. There were 46 mills in operation in Washington and 165 in Oregon.[20] At the current price of $10 per thousand for rough lumber, this would indicate a cut of about 130,000,000 feet

[16] Spectator, Oregon City, Oreg., Feb. 5, 1846; Columbian, Olympia, Wash., Sept. 17, 1853; Pioneer and Democrat, Olympia, Apr. 15, 1854; Oregonian, Portland, Oreg., Mar. 25, 1861; Interview with George H. Hines, May, 1922. (Mr. Hines, the secretary of the Oregon Historical Society, was an early settler in Oregon and is exceptionally well informed about early West Coast history.)

[17] Overland Monthly, July, 1870, pp. 55-60. Lumbering in Washington Territory, by C. M. Scamnon.

[18] Hittell, J. S.: Commerce and Industry of the Pacific Coast. San Francisco, 1882, pp. 588-593.

[19] Interviews with Geo. H. Hines, May, 1922, and C. B. Bagley, June, 1922.

[20] U. S. Bureau of the Census, Census of 1870: Statistics of Industries in the United States, pp. 720 et seq., 741.

in Washington and 100,000,000 in Oregon. The Washington cut was actually 128,743,000. In 1875 the Oregon cut was 98,285,684 feet.[21]

INFLUENCE OF RAILROAD BUILDING ON LUMBER INDUSTRY.

After 1870 the development of the lumber industry on the west coast was very intimately connected with the progress of railroad building. Until this time the lumber markets had been small. Although some lumber had been sent to foreign markets, chiefly to the Hawaiian Islands, China, and South America, most of the demand came from the local communities and from California. None of these regions were developed industrially and, with the exception of China, all were sparsely populated. Railroad building began about 1871, and after 1880 progressed rapidly until the completion of the Great Northern Railway in 1893, greatly extending markets and leading to a remarkable expansion of the lumber industry, as during the course of their construction the railroads used large quantities of lumber, and the great influx of population which followed the opening of the roads increased the demand for lumber. The roads also gave access to the markets of the Rocky Mountain region and the Missouri and upper Mississippi Valleys, and thus permitted expansion in that direction.

The railroads came first to Oregon and that State developed earlier than Washington. In 1873 the Oregon & California Railroad was opened, thus connecting Portland and the Willamette Valley with San Francisco and the California valleys. This greatly stimulated the settlement of the Willamette Valley, and thus widened the lumber market. The chief development of the industry in Oregon between 1869 and 1879 occurred along the line of the new road. While there had been some railroad building in western Washington during the decade, the amount was small and did not appreciably affect the industry. The industry there became even more definitely centered on the middle Sound, where, in Pierce, King, Kitsap, Jefferson, and Island Counties, 11 mills cut over 88 per cent of the total lumber production of the territory in 1879. The total was valued at $1,734,742.[22]

By 1880 the cargo mills on Puget Sound and along the coast were definitely passing into the hands of large San Francisco companies. One mill company owned 4 mills on Puget Sound, with a combined annual production of about 100,000,000 feet. It owned 16 lumber carriers and 106,000 acres of timberland. Another company, having 15 vessels, had 7 mills along the coast, with a combined daily capacity of 270,000 feet. Thirty thousand acres of land and 4 ships were owned by one company, while still another had 35,000 acres and 7 ships.[23]

After 1880 there was a larger amount of railroad building in western Washington and the lumber industry there grew rapidly. In 1883 the Northern Pacific Railway reached the coast. At first it entered Tacoma by way of Portland, but in 1887 the direct line over the Cascades to Puget Sound was opened. During the years following

[21] Appleton's Annual Encyclopedia, New York, 1875, p. 756; Oregon State Census, 1875, quoted in Progress of Oregon and Portland, by William Reid, Portland, 1879, p. 17.
[22] U. S. Census Bureau, Census of 1880: Manufacturing Industries, pp. 166, 187, 336 et seq., 368 et seq.
[23] Hittell, J. S.: Commerce and Industry of the Pacific Coast. San Francisco, 1882, pp. 588–597.

a number of branch lines were built, and in 1893 the Great Northern Railway reached Puget Sound. This led to a rapid expansion of the lumber industry in western Washington. In 1887 over 400,000,000 feet were sawn on Puget Sound and in 1888 over 450,000,000 feet.[24]

In spite of the opening of excellent rail connections with the lumber-using regions of the Missouri and Mississippi Valleys, it was not until after 1900 that the price of lumber was high enough to permit extensive shipment to markets east of the Rocky Mountains. Thus in 1899 only 225,525,000 feet, out of a total production of 1,429,032,000 feet in the State of Washington, were shipped by rail. More than twice as much moved to market by water, while the local markets took half of the entire cut. Since that time the proportion of the cut moving by rail has been steadily rising. In 1905 28 per cent of the Washington lumber production was shipped by rail; by 1911 the proportion had risen to 59 per cent, and by 1920 to about 65 per cent.[25]

GROWTH OF THE INDUSTRY SINCE 1879.

The growth of the lumber industry in Oregon and Washington since 1879 is shown in Table 8.

TABLE 8.—LUMBER PRODUCTION IN OREGON AND WASHINGTON, BY DECADES, 1879 TO 1919.[1]

Year.	Oregon.	Washington.	Total.
	M. board feet.	*M. board feet.*	*M. board feet.*
1879	177,171	160,176	337,347
1889	444,565	1,061,560	1,506,125
1899	734,538	1,429,032	2,163,570
1909	1,898,995	3,862,916	5,761,911
1919	2,577,134	4,961,175	7,538,309

[1] U. S. Census Bureau, Census of 1880, Forest trees of North America, p. 487; Idem, Census of 1890, Manufactures, Special Industries, p. 622; U. S. Department of Agriculture Bul. No. 673, p. 10 et seq.; U. S. Census Bureau, Census of 1920, Lumber, lath, and shingles, p. 5.

Available statistics indicate that the lumber production in western Washington is and has always been at least 90 per cent of the total cut in the State, while in Oregon the western part of the State has usually produced in excess of 80 per cent of the total production.[26]

[24] "Tacoma" by H. M. Howard, in New England Magazine, new series, February, 1893, p. 796; U. S. Commissioner of Agriculture, annual report, 1888, p. 630; The Metropolis of the New State, Seattle of Washington, by W. G. Stanford and George McKenzie, Chicago, 1889, p. 17.

[25] U. S. Department of Agriculture Bul. No. 673, Production of lumber, lath, and shingles, 1916, p. 11; U. S. Forest Service Bul. No. 74, Production of lumber, 1905, p. 14; Pacific Lumber Trade Journal, January, 1906, p. 20, August, 1912, p. 19; West Coast Lumberman, May 15, 1921, pp. 32-38.

[26] West Coast Lumberman, June 1, 1922, p. 28, May 15, 1921, pp. 32-38; The Timberman, August, 1918, May, 1919. See pp. 13-15, supra.

CHAPTER III.—FINANCIAL INSTABILITY.

It is almost an axiom that sales are easier, more regular, and on better terms when business is prosperous than when profits are small and operation irregular. This is as true of sales of raw materials or of machinery as of goods for direct consumption. It applies no less truly to sales of labor. Labor leaders well know that it is much easier to secure increased wages, regular employment, or satisfactory working conditions from a profitable company or industry than from one which is unprofitable. This is not primarily a matter of greater generosity on the part of the prosperous employer; it is at bottom a question of the ability of the industry to pay high wages, furnish regular employment, or give good conditions. For a company to pay more, directly or indirectly, for its labor means comparatively little when profits are large, but when the company is making little or nothing it may mean the difference between continued operation and entire suspension.

With the business cycle as a result of our present economic organization, it is to be expected that any industry will have periods of better and of worse conditions. These fluctuations are of great importance in determining labor conditions and must be known to understand the actual course of relations between employers and employees. But there is another set of irregularities in business conditions which can be explained only by reference to the peculiar circumstances of the industry. These may to a considerable extent offset the cyclical variations, or they may aggravate them. This chapter is concerned chiefly with the latter type of fluctuations.

While some work has been done in an attempt to understand the extent and significance of the changes in conditions in the West Coast lumber industry, the data available are still far from satisfactory. It is only within the past few years that anything like careful attempts have been made to assemble the information, and as yet there is not sufficient basis for definite conclusions on all points.

The volume of lumber production on the West Coast varies from year to year with the changes in general business conditions in the country. Sometimes the volume of production will change as much as 50 per cent within a single year.[1] While these changes are very much greater than the variation in the general volume of business in the United States, they are less than the fluctuations in the production of some of the other basic materials, such as pig iron or copper.[2] This large variation in volume of production is due to the fact that the chief demand for lumber is in construction work, and changes in business conditions affect construction sooner than most other lines of activity. The changes in lumber production would undoubtedly be greater than they are were it not for the great pres-

[1] The 1922 production was more than 59 per cent greater than the 1921 cut. See Four L News Letter, Jan. 15, 1923.

[2] Babson, Roger: Business Barometers. Massachusetts, 1921, table facing p. 140.

sure constantly exerted upon lumber producers to continue cutting even at considerable loss.[3]

FLUCTUATIONS IN LUMBER PRICES.

The chief barometer of instability in the industry is the price of lumber. Fluctuations in demand are reflected in price changes rather than in changes in volume of production, since most of the companies attempt to meet such conditions by cutting prices rather than by restricting production. In fact, some companies attempt to meet the problem of decreased demand by running two shifts in order to lower costs to a point where they can afford to reduce prices and stimulate buying.[4] Such an attitude on the part of the producers leads to very erratic price movements. Small changes in demand lead to disproportionate changes in price, either up or down.[5]

Table 8a and chart 2 show the price movements since 1898 on two representative grades of Douglas fir lumber and one grade of cedar shingles.[6]

TABLE 8a.—AVERAGE ACTUAL WHOLESALE PRICES PER M BOARD FEET OF DOUGLAS FIR LUMBER NO. 1 COMMON AND NO. 2 AND BETTER DROP SIDING AND PER M OF RED CEDAR SHINGLES, 1898 TO 1923, BY MONTHS.[a]

DOUGLAS FIR: NO. 1 COMMON.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average.
1898....	$6.75	$7.25	$7.25	$7.25	$6.75	$7.25	.....	$7.00	$7.75	$7.75	$7.75	$7.50	$7.30
1899....	7.50	7.25	7.50	7.50	7.50	7.00	$7.25	7.50	7.50	.....	.....	8.00	7.45
1900....	8.00	.....	8.75	9.25	9.00	9.25	9.00	8.75	8.50	8.25	.....	8.00	8.68
1901....	8.25	8.75	8.50	8.50	8.75	9.00	.....	.....	.....	9.25	.....	.....	8.71
1902....	.....	.....	9.50	9.75	9.75	10.00	10.50	10.50	10.50	.....	10.50	.....	10.13
1903....	10.00	9.75	10.00	10.00	10.25	10.25	.....	.....	.....	.....	8.50	8.50	9.66
1904....	.....	8.00	7.00	7.00	6.00	5.75	5.75	6.00	.....	.....	7.00	.....	6.56
1905....	.....	7.25	7.50	7.50	7.75	7.50	8.00	8.00	8.25	8.25	8.50	8.50	7.91
1906....	10.00	11.25	11.25	11.25	11.75	13.50	13.50	13.50	13.75	13.75	14.00	13.75	12.60
1907....	13.75	.....	.....	13.75	14.25	14.25	14.25	14.25	13.50	13.25	12.75	13.00	13.70
1908....	12.00	12.00	11.75	10.75	10.00	9.50	9.50	8.75	9.25	9.00	9.00	9.50	10.08
1909....	10.50	10.25	10.75	10.25	9.75	9.75	10.00	10.25	.....	.....	.....	.....	10.19
1910....	10.00	10.00	10.00	10.25	11.00	11.00	.....	.....	.....	.....	.....	.....	10.38
1913....	9.50	10.50	10.50	11.00	10.50	9.50	8.50	8.50	8.00	8.00	8.00	8.00	9.21
1914....	8.00	8.00	8.50	8.00	8.00	8.00	8.00	8.50	8.00	7.50	7.50	7.00	7.92
1915....	7.50	7.50	8.00	7.50	7.50	7.50	7.50	7.50	8.00	8.00	8.50	9.50	7.88
1916....	10.00	10.50	11.50	11.50	11.50	11.00	10.00	9.50	9.00	9.00	10.00	11.00	10.38
1917....	11.50	12.00	12.00	13.00	16.50	18.50	18.50	18.50	18.50	16.50	16.50	18.50	15.88
1918....	18.50	18.50	18.50	18.50	18.50	18.50	19.50	19.50	19.50	16.50	16.50	16.50	18.25
1919....	17.50	17.50	17.50	17.50	18.50	25.50	28.50	31.50	32.50	32.50	32.50	33.50	25.42
1920....	37.50	37.50	37.50	37.50	37.50	29.50	29.50	29.50	25.50	24.50	16.50	16.50	29.92
1921....	15.50	12.50	12.50	12.50	11.50	11.50	11.50	10.50	10.50	10.50	11.50	11.50	11.83
1922....	11.50	12.50	11.50	11.50	13.50	13.50	14.50	16.50	19.50	19.50	19.50	19.50	15.25
1923....	19.50	19.50	21.50	21.50	21.50	19.50	19.50	18.50	.....	.....	.....	.....	.....

[a] Prices for Douglas fir lumber No. 1 common and No. 2 drop siding for 1898 to 1910 are from U. S. Department of Commerce, Bureau of Corporations, The Lumber Industry, Washington, 1914, pt. 4, pp. 483–489; prices for red cedar shingles for 1898 to 1905 are from The Timberman, January, 1921, p. 42, and all are prices f. o. b. Puget Sound. Prices for later years for all three commodities are from U. S. Bureau of Labor Statistics Buls. Nos. 69, 75, 81, 87, 93 ,99, 114, 149, 181, 200, 226, 269, 296, 320, and 335, and monthly statement of Wholesale Prices of Commodities, January to September, 1923, and are pries f. o. b. mills in Washington.

[3] Seasonal and individual irregularities in operation, being due to technical rather than financial considerations, are considered in Chapter IV.

[4] U. S. Department of Agriculture Report No. 114: Some Public and Economic Aspects of the Lumber Industry, by William B. Greeley, p. 62.

[5] Idem., p. 47.

[6] In the chart the shingles are taken in 10 M units to make the comparison with an M of lumber easier.

TABLE 8a.—AVERAGE ACTUAL WHOLESALE PRICES PER M BOARD FEET OF DOUGLAS FIR LUMBER NO. 1 COMMON AND NO. 2 AND BETTFR DROP SIDING AND PER M OF RED CEDAR SHINGLES, 1898 TO 1923, BY MONTHS—Concluded.

DOUGLAS FIR: NO. 2 AND BETTER, DROP SIDING, CLEAR.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Aver-age.
1898....	$9.50	$10.25	$11.25	$11.25	.....	$12.00	.....	$12.00	.....	.....	$12.75	.....	$11.29
1899....	.....	11.50	11.50	12.00	$12.25	12.25	$13.25	13.75	$14.00	$14.00	14.00	$14.00	12.95
1900....	14.00	14.00	14.00	14.00	14.00	14.00	.....	13.50	13.00	12.00	12.00	12.00	13.32
1901....	12.00	12.00	12.00	12.00	12.25	12.50	12.50	12.00	12.00	11.75	11.25	11.75	12.00
1902....	12.25	14.50	15.00	15.00	15.25	15.75	16.00	16.00	16.25	17.00	17.00	17.25	15.60
1903....	17.00	17.25	18.00	17.75	17.75	17.50	17.50	17.25	16.75	16.50	15.75	15.75	17.06
1904....	15.50	14.00	13.75	13.50	13.00	12.50	12.25	12.25	12.50	12.75	13.00	13.25	13.19
1905....	13.25	13.00	13.50	14.00	14.25	14.50	14.50	15.00	15.50	16.00	17.00	17.50	14.83
1906....	17.75	17.75	18.25	19.00	19.75	20.25	20.25	20.25	20.50	20.75	20.75	21.00	19.69
1907....	21.00	21.25	.....	21.75	22.00	22.00	22.50	21.75	21.50	21.25	21.00	20.50	21.50
1908....	20.25	19.75	19.75	19.00	18.25	17.75	17.00	17.00	16.50	17.25	17.75	18.00	18.19
1909....	17.75	18.25	18.25	18.25	17.75	17.25	17.50	17.75	18.50	18.75	18.00	18.00	18.00
1910....	18.50	18.50	18.75	19.50	19.75	19.75	19.75	19.00	.....	.....	.....	.....	19.19
1913....	18.00	18.50	19.00	20.00	19.50	18.50	17.00	16.50	16.00	15.50	15.00	14.50	17.33
1914....	14.50	15.00	15.00	15.00	14.00	14.00	15.00	15.00	14.00	14.00	13.00	13.00	14.29
1915....	14.00	14.00	14.00	14.00	14.00	13.50	13.50	13.50	14.00	14.00	15.00	18.00	14.29
1916....	19.00	19.00	19.00	20.00	20.00	19.00	18.00	18.00	17.00	17.00	18.00	19.00	18.58
1917....	19.00	20.00	20.00	21.00	24.00	26.00	26.00	26.00	26.00	26.00	26.00	27.00	23.92
1918....	27.00	27.00	27.00	27.00	27.00	27.00	31.00	31.00	31.00	27.00	27.00	27.00	28.00
1919....	27.00	27.00	27.00	27.00	28.00	37.00	40.00	51.00	51.00	52.00	53.00	56.00	39.67
1920....	71.00	71.00	71.00	71.00	66.00	51.00	51.00	56.00	46.00	41.00	31.00	31.00	54.75
1921....	26.00	23.00	23.00	23.00	21.00	21.00	21.00	21.00	21.00	26.00	31.00	31.00	24.00
1922....	30.00	31.00	31.00	31.00	36.00	36.00	38.00	38.00	41.00	41.00	41.00	41.00	36.25
1923....	42.00	43.00	46.00	46.00	46.00	45.00	39.00	39.00	.....	.....	.....	.....	.....

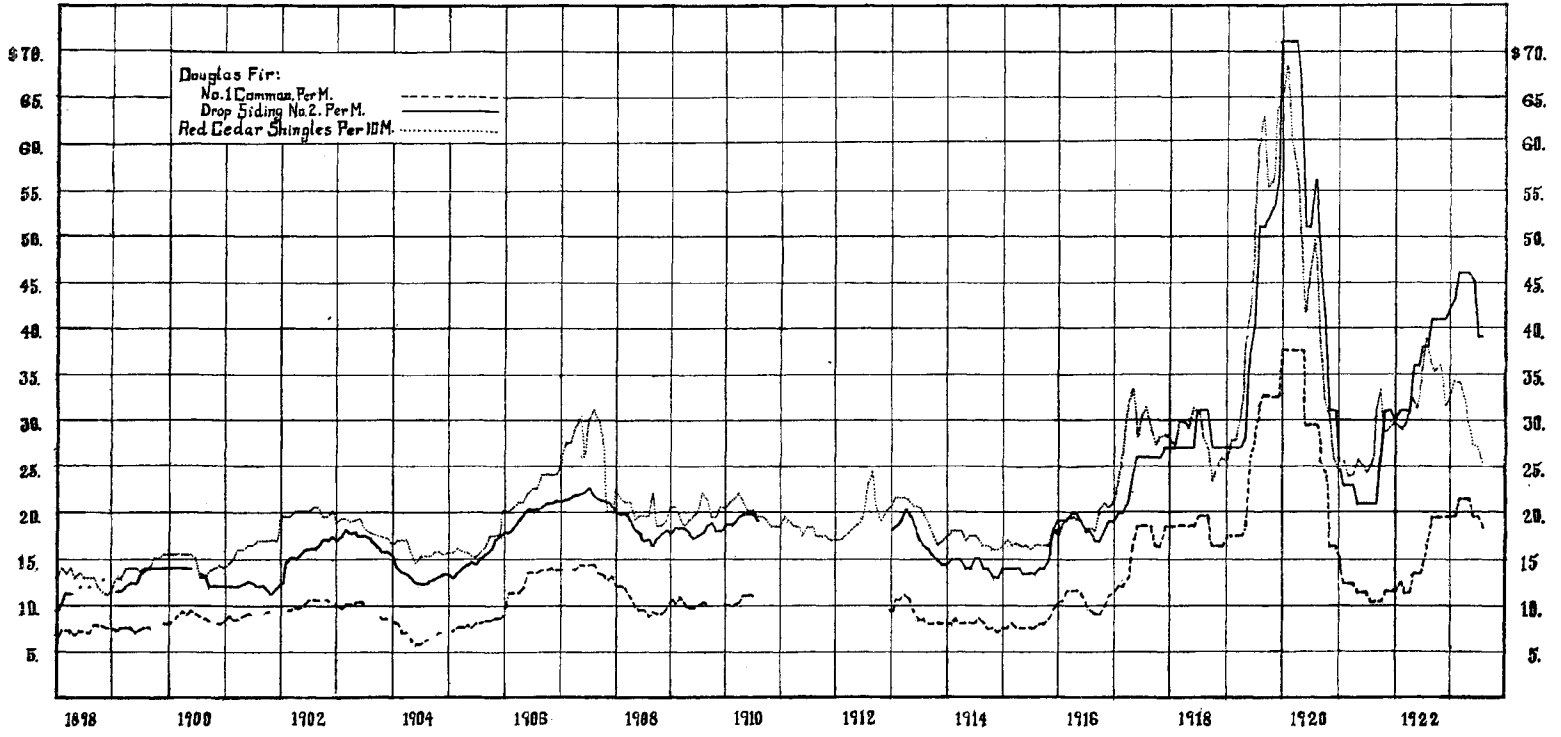
SHINGLES: RED CEDAR, CLEAR.

1898....	$1.30	$1.40	$1.35	$1.40	$1.30	$1.35	$1.30	$1.30	$1.30	$1.20	$1.15	$1.12	$1.29
1899....	1.15	1.30	1.30	1.40	1.40	1.40	1.38	1.40	1.40	1.50	1.50	1.55	1.39
1900....	1.55	1.55	1.55	1.55	1.55	1.55	1.50	1.30	1.30	1.37	1.40	1.43	1.47
1901....	1.40	1.45	1.50	1.60	1.60	1.65	1.65	1.70	1.70	1.70	1.70	1.70	1.61
1902....	1.95	1.95	1.95	2.00	2.00	2.00	2.00	2.05	2.05	1.95	1.95	2.00	1.99
1903....	1.89	1.91	1.91	1.89	1.90	1.91	1.84	1.79	1.77	1.75	1.74	1.72	1.84
1904....	1.66	1.70	1.70	1.70	1.58	1.45	1.51	1.52	1.52	1.57	1.58	1.55	1.59
1905....	1.56	1.57	1.61	1.59	1.57	1.54	1.52	1.57	1.64	1.75	1.75	1.78	1.62
1906....	2.00	2.00	2.05	2.10	2.10	2.20	2.25	2.25	2.40	2.40	2.40	2.40	2.21
1907....	2.50	2.75	2.75	2.90	3.00	2.60	3.00	3.10	3.00	2.75	2.00	2.00	2.70
1908....	2.25	2.15	2.10	2.10	1.90	1.95	1.95	1.95	2.20	1.85	1.85	1.90	2.01
1909....	2.05	2.05	1.95	1.85	1.90	1.95	2.00	2.20	2.15	1.95	1.95	2.05	2.00
1910....	2.05	2.10	2.15	2.20	2.10	2.00	2.00	1.95	1.95	1.90	1.85	1.85	2.01
1911....	1.85	1.95	1.90	1.85	1.85	1.75	1.83	1.83	1.75	1.75	1.75	1.70	1.81
1912....	1.70	1.70	1.75	1.80	1.85	1.87	1.95	2.30	2.45	2.00	1.90	2.00	1.94
1913....	2.05	2.15	2.15	2.15	2.10	2.05	2.05	1.95	1.85	1.75	1.65	1.70	1.97
1914....	1.75	1.80	1.80	1.80	1.70	1.75	1.75	1.70	1.65	1.65	1.60	1.60	1.71
1915....	1.64	1.70	1.65	1.68	1.65	1.65	1.60	1.65	1.65	1.65	1.65	1.80	1.66
1916....	1.77	1.86	1.91	1.93	1.91	1.90	1.85	1.84	1.80	2.00	2.10	2.05	1.91
1917....	2.16	2.37	2.64	3.17	3.31	2.81	3.00	3.13	2.88	2.71	2.80	2.83	2.82
1918....	2.79	2.74	2.98	2.97	2.90	3.12	3.08	2.82	2.70	2.37	2.48	2.58	2.79
1919....	2.56	2.77	2.78	3.10	3.81	4.27	4.82	5.98	6.29	5.53	5.60	6.35	4.49
1920....	6.57	6.82	6.08	5.72	4.99	4.19	4.57	4.96	3.88	3.22	3.09	2.59	4.72
1921....	2.49	2.56	2.40	2.42	2.57	2.52	2.43	2.50	3.06	3.32	2.87	2.92	2.67
1922....	2.99	2.91	2.92	3.05	3.24	3.13	3.52	3.89	3.63	3.52	3.60	3.18	3.30
1923....	3.27	3.45	3.42	3.27	2.98	2.74	2.71	2.52	.....	.....	.....	.....	.....

While the curves in chart 2 show a general rise in price during this period of about 25 years, the most characteristic feature of the prices is the erratic way in which they change. Several times prices have more than doubled or have fallen to less than half within a year, while in numerous cases the change has been half this much. That these wide changes are not confined to these few items is shown by the prices received in 1920 and 1921 by a representative group of mills. This group, representing over one-fourth of the entire production of the West Coast, reported that the average price per thousand board feet for their entire production was over 47 per cent lower in 1921 than in 1920.[7]

[7] West Coast Lumberman's Association: Analysis of Douglas Fir Costs and Sales Returns, 1920, 1921. In 1920 the average returns were $36.25 per thousand board feet, in 1921 $19.08 per thousand board feet.

CHART 2.—TREND OF WHOLESALE PRICES OF DOUGLAS FIR LUMBER, NO. 1 COMMON AND NO. 2 AND BETTER DROP SIDING, CLEAR, AND RED CEDAR SHINGLES, CLEAR, JANUARY, 1898, TO AUGUST, 1923.



AVERAGE COST OF PRODUCTION.

It is impossible for the industry to adjust itself to such rapid price changes. Some of the costs are entirely beyond its control, while most of them are controllable only to a limited extent. Table 9 presents an analysis of the average cost of production during the years 1919, 1920, 1921, and 1922. These figures are based upon reports of a group of representative companies which together produced more than 25 per cent of the entire output of the industry. In the beginning of 1919 conditions were unfavorable but they improved quickly, and were very good during the last half of that year and most of 1920. Late in 1920 depression occurred, and during the latter part of that year and nearly all of 1921 profits, if any, were small, but during all of 1922 business was very good. The reports thus show not only the items of cost but also something of the change from good to bad years.

TABLE 9.—AVERAGE COSTS OF LUMBER PRODUCTION, PER THOUSAND BOARD FEET, 1919 TO 1922.[1]

Item.	1919	1920	1921	1922
LOGGING.				
Labor	$5.64	$7.22	$3.97	$4.83
Supplies	1.50	1.65	1.28	1.35
Repairs, labor	.63	.52	.22	.34
Repairs, materials	.38	.29	.12	.17
Stumpage	2.59	2.79	2.94	3.04
Depreciation	.72	.93	.78	.87
Administration	.34	.63	.43	.46
General expense	1.68	1.33	1.45	1.50
Total	13.48	15.36	11.19	12.26
Logs purchased	15.96	22.12	14.54	15.96
Average cost	14.89	18.39	12.78	14.10
Inventory gain	.23	[2] .06	[2] .16	.06
Cost of logs disposed of	14.66	18.45	12.94	14.04
Returns from logs	14.76	18.66	12.96	14.25
MILLS.				
Cost of logs sawn	[3] 13.50	[3] 17.35	[3] 12.06	[3] 13.11
Manufacturing:				
Labor	6.20	7.09	4.46	4.49
Supplies	.56	.84	.62	.52
Repairs, labor	.65	.64	.37	.33
Repairs, materials	.50	.56	.31	.26
Depreciation	.65	.94	1.01	.74
Administration	.97	1.52	1.23	1.16
General expense	.68	.88	.61	.64
Total manufacturing	10.21	12.47	8.61	8.14
Total, including log cost	23.71	29.82	20.67	21.25
Inventory gain	.44	[2] 1.89	.33	.63
Production cost of lumber	23.27	31.71	20.34	20.62
Shipping expense	.90	.98	.72	[4] .78
Selling expense	.78	1.07	.72	[4] .71
Total cost of lumber sold	24.95	33.76	21.78	21.94

[1] West Coast Lumberman's Association: Analysis of Douglas Fir Costs and Sales Returns, 1919, 1920, 1921, 1922.
[2] Loss.
[3] The lower cost of logs shown here than in the preceding part of the table is a result of an overrun of logs, whereby more lumber is sawn from a log than the log scale indicated that the log contained. The amount of this overrun in 1919 was 9.4 per cent; in 1920, 7.6 per cent; in 1921, 6.9 per cent; and in 1922, 8.3 per cent.
[4] This figure is on less than the total product.

An analysis of these figures shows that the chief element of cost is labor, and that labor costs tend to fluctuate more widely than other elements. The direct labor payments were about 50 per cent of the

total outlay by the companies. If we were to include the indirect payments to labor, the aggregate would be between 70 and 80 per cent of the entire production costs.[8] When prices were rising wages in the lumber camps rose more rapidly than did other costs; mill wages rose less rapidly. When lumber prices fell, all wages fell more rapidly than did other costs, but in no case was the wage change as rapid as the change in lumber prices. The material available indicates that during the past 25 years wages have generally held a similar position relative to general and lumber prices. Wages in this industry change more rapidly than do general prices, but less rapidly than lumber prices. Cost of living thus serves as a check upon the fluctuations in wages caused by changes in lumber prices. A comparison of wage rates, cost of living, and lumber prices shows that the greatest fluctuations occurred in lumber prices, the least in cost of living, with wages in an intermediate position.[9]

FLUCTUATION IN PROFITS.

Because lumber returns vary so much more than do costs, profits fluctuate much more violently than do lumber prices. Profits have seldom been large; often costs have exceeded returns. In 1904, 110 mills reported that 25 per cent of the log was sold at a small profit, 49 per cent at cost, and 26 per cent at a loss. Few, if any, mills on the West Coast made any profit that year.[10] A year later a prominent lumberman said:

> The actual fact is that the manufacture of lumber in itself never paid a very large profit; the fortunes which have been amassed by the lumber manufacturers have almost invariably resulted from enhanced values on reserved timberland holdings.[11]

During 1906 and 1907 profits were generally high. In July, 1907, it was estimated that the normal rate of profits on the West Coast at that time was $1.50 per thousand board feet, or about 10 per cent of the sales price.[12] But a decided slump came in the late summer of 1907 and for four years prices were low and most mills lost money. Then 1912 and 1913 were reasonably good years, but in the latter part of 1913 a slump began which lasted until late in 1915, with little profit for any of the mills. Prices and profits rose in the latter part of 1915 and, except for a short time during the summer of 1916, continued to rise until checked by the Government price-fixing policy of 1918.[13]

In June, 1918, the West Coast Lumberman's Association presented to the price-fixing committee of the War Industries Board cost figures based upon 50 per cent of the production on the West Coast. This data showed a cost of $23.45 per thousand board feet. In this was included an allowance of $3.11 for stumpage and $1.15 for depreciation. On the basis of these figures, the price was fixed at a level which it was estimated would give an average of $26 per thousand

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[8] Four L Bulletin, January, 1921, p. 15.
[9] Data for wages are given in Chapter V.
[10] Pacific Lumber Trade Journal, Seattle, Wash., December, 1904, p. 28.
[11] U. S. Department of Commerce, Bureau of Corporations: Report on the Lumber Industry. Washington, 1914, vol. 1, p. 38.
[12] Pacific Lumber Trade Journal, Seattle, Wash., August, 1907, p. 9.
[13] U. S. Department of Agriculture Report No. 114: Some Public and Economic Aspects of the Lumber Industry, by William B. Greeley, pp. 21, 28.

board feet for the lumber produced. It was estimated that this would allow a profit of 3.7 per cent for one-half of the industry, but would mean an actual loss for one-fifth of the producers.[14]

STATISTICS OF COSTS, RETURNS, AND PROFITS.

Exact and regular statistics of costs and profits were not available before 1919. Beginning with that year the West Coast Lumberman's Association has collected and compiled data concerning the costs and returns for a considerable proportion of the representative firms in the industry. Table 10, based on this data, shows the average costs, returns, and profits during 1919, 1920, 1921, and 1922.

TABLE 10.—AVERAGE COSTS, RETURNS, AND PROFITS OF REPRESENTATIVE LUMBER COMPANIES ON THE WEST COAST, 1919 TO 1922.[1]

Year.	Number of companies reporting.	Total sales.	Average cost per M feet.	Average returns per M feet.[3]	Average profits per M feet.	Other profits per M feet (average).	Total average profits per M feet.
		M feet.					
1919	50	1,666,455	$24.95	$26.15	$1.20	$1.26	$2.46
1920	58	1,817,849	33.76	36.69	2.93	1.47	4.40
1921	70	2,046,162	21.78	19.63	[2] 2.15	1.00	[2] 1.15
1922	81	2,882,212	21.94	22.71	.77	1.13	1.90

[1] West Coast Lumberman's Association: Analysis of Douglas fir costs and sales returns, 1919, 1920, 1921, 1922. (Prepared for private distribution.)
[2] Loss.
[3] Figures include a saving on freight (known as "underweight"), due to lumber shipped weighing less than estimated, as follows: 1919, 45 cents; 1920, 44 cents; 1921, 55 cents, and 1922, 44 cents.

The reports also show the average costs of production and average total returns for each individual company reporting. An analysis of these reports is given in Table 11. The cost figures are somewhat different from the totals shown in Tables 9 and 10, in that in those tables inventory gain or loss is counted as an element in cost while in Table 11 it is omitted. Furthermore there is a slight discrepancy for 1921 owing to the fact that sales were much in excess of production, making a slight difference in average costs. In computing the data for profits it has been assumed that the difference between costs and total returns represents net profits. This is probably not strictly true in all cases, even aside from the qualification just mentioned. The rate of profits was computed by taking the total costs as 100. The four sets of data, costs, returns, profits, and per cent of profits, were divided into quarters on the basis of the volume of production represented by the reports, rather than the number of companies. The quartiles and medians show where these divisions were made.[15]

[14] West Coast Lumberman, August 15, 1918, p. 43.
[15] One-fourth of the total volume of production represented in the reports is contained between the lowest figure and the first quartile, a second fourth between the first quartile and the median, a third fourth between the median and the third quartile, the last fourth between the third quartile and the highest figure.

TABLE 11.—COSTS, RETURNS, AND PROFITS PER THOUSAND BOARD FEET OF PRODUCTION OF REPRESENTATIVE FIRMS ON THE WEST COAST, 1919 TO 1922.[1]

Year.	Average.	Lowest.	First quartile.	Median.	Third quartile.	Highest.
	Costs.					
1919	$25.39	$18.52	$23.44	$25.10	$27.10	$32.29
1920	31.86	19.45	29.25	31.73	34.63	46.59
1921	21.95	14.43	20.39	21.63	23.18	55.79
1922	22.54	14.00	20.30	22.52	24.67	32.76
	Returns.					
1919	$27.36	$20.46	$25.90	$27.20	$28.93	$35.51
1920	38.54	22.34	35.98	38.20	40.68	56.13
1921	20.86	15.44	19.37	20.40	22.29	31.71
1922	23.98	13.73	21.19	23.39	25.89	33.48
	Profits.					
1919	$1.97	[2] $7.00	$0.87	$1.60	$3.26	$11.99
1920	6.68	[2] 6.47	3.34	5.80	10.08	20.29
1921	[2] 1.09	[2] 37.90	[2] 2.13	[2] .45	.60	3.83
1922	1.44	[2] 6.07	.22	1.24	2.72	12.49
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
1919	7.74	[2] 22.05	3.43	5.69	13.95	50.98
1920	20.95	[2] 15.43	10.70	18.22	30.05	79.54
1921	[2] 4.97	[2] 67.93	[2] 9.49	[2] 2.97	3.18	18.19
1922	6.39	[2] 20.50	.92	5.88	13.98	59.50

[1] West Coast Lumberman's Association: Analysis of Douglas fir costs and sales returns, 1919, 1920, 1921, 1922. (Prepared for private distribution.)
[2] Loss.

The number of firms reporting and the total production for each year were as follows:

Number of firms:		Total production:	M feet.
1919	50	1919	1,677,105
1920	58	1920	1,918,205
1921	[16] 67	1921	1,942,441
1922	81	1922	2,829,519

In a composite cost statement issued by the West Coast Lumberman's Association to its own members, based on the actual figures of 51 operations, the average investment was placed at $65.29 for each thousand feet of annual cut. The details are as follows: [17] Logging equipment, $9.48; logs, supplies, and accounts, $1.55; manufacturing equipment, $16.04; lumber, supplies, and accounts, $6.53; stumpage, $31.69.

The stumpage was estimated on the basis of 13 years of industrial life, that being the average expectancy as shown by 31 lumbermen who submitted their books to the Government Price Fixing Committee in June, 1918. If we accept this estimate of the actual investment of the companies represented in these reports, we find that the rate of profits on the investment was 3.8 per cent in 1919, 6.7 per cent in 1920, 2.9 per cent in 1922, and a loss of 1.8 per cent in 1921. However, it is probable that the companies ran much nearer to capacity in 1920 and 1922 than in either of the other years, and

[16] Three firms included in Table 10 are omitted here on account of having produced no lumber during 1921.
[17] Four L Bulletin, April, 1920, p. 26.

so the actual investment per thousand of annual cut would be less in 1920 and 1922 than the other years, with a correspondingly greater rate of profit. The four-year average, however, would be little affected by these factors.

While some of the best mills on the West Coast do not report to the association, on the whole it is the better mills which do report. The reporting mills are certainly above the average in size and quality of their plants and in financial strength. Hence the conclusions drawn from these reports represent the more prosperous half of the industry.

OBSTACLES TO STABILIZATION OF INDUSTRY.

HEAVY OVERHEAD CHARGES.

The most important obstacle to attaining the elasticity of volume of production needed to stabilize prices is the heavy overhead carried by the industry. The chief element of this overhead is, of course, the connection with the large amount of raw material held by the mills. Figures just quoted show that nearly one-half of the investment in the industry is in standing timber. This is probably an understatement rather than an overstatement. In 1917 it was estimated that there were 109 feet of timber standing for every foot cut that year.[18] With the much larger cut in 1922 the proportion considerably decreased, but probably not to less than 80 to 1.[19]

Probably something over one-fourth of the timber is owned by the Government, about one-fourth is owned in connection with logging and sawmill operations, and about one-half is held as an investment. In 1917 it was estimated that the annual charge for interest on borrowed money, bond payments, taxes, and fire protection totaled $2.15 for all the lumber cut during a year, or about 2 cents per thousand for all the timber standing on the West Coast. As over one-fourth of the timber was held by the Federal Government and so exempt from all charges except fire protection, the burden on the privately owned timber was about 2.6 cents per thousand. Of this about 1 cent per thousand was for taxes and fire protection.[20]

Of course not all of these fixed charges are borne directly by the timber owned in connection with logging or sawmill operations, yet all of them are exerting pressure to increase production. Many timber owners are financially unable to continue to meet these fixed charges and must dispose of their timber. Many others feel that timber is no longer a good investment and that it is best to sell as soon as possible. Before 1907 timber rose rapidly in value and sales were easy. Since that time values have been very erratic, but have seldom risen much, and demand for timber has been far from keen. Nearly all of the privately owned timber on the West Coast which is not held in connection with operations is on the market, although many owners will not sell unless they can get a reasonable price. Even the largest and probably the strongest timber owner in the region has, since 1917, been selling five times as much timber

[18] U. S. Department of Agriculture Report No. 114: Some Public and Economic Aspects of the Lumber Industry, by William B. Greeley, p. 48.
[19] U. S. Forest Service, Timber Depletion, Lumber Prices, Lumber Exports, and the Concentration of Timber Ownership, Washington, 1920, p. 23; Four L News Letter, Jan. 15, 1923.
[20] U. S. Department of Agriculture Report No. 114: Some Public and Economic Aspects of the Lumber Industry, by William B. Greeley, pp. 16, 48.

as it manufactures in its four large plants, because it no longer considers timber a good investment.[21] Some companies are strong enough to hold their timber when the market is poor. Many have to sell regardless of the conditions of the market. It is these latter owners who break the market. The intensity of the pressure may be illustrated by an extreme case. In 1909 farmers in western Klickitat County, Wash., just over the line to the east of the West Coast region, but facing similar conditions, burned their timber because they could not sell it, give it away, nor pay taxes on it.[22] Many another owner has sacrificed his timber for a song. Many mill companies have cut their timber at a loss in order to find a market for stumpage and thus pay their fixed charges.

IRREGULARITY OF OPERATION.

There are several other important factors forcing production in excess of market requirements. One of these is the rapid deterioration of plant and equipment during periods of idleness. Much of the construction is of a temporary nature and will decay in a short time whether used or idle. The rate of depreciation is high, making shutdowns very costly. A second factor is the difficulty of rebuilding the organization, which quickly goes to pieces when the plant is not in operation. The almost entire dependence of a large part of the region upon the lumber industry creates a feeling of responsibility on the part of the operator toward his employees and the community. Many companies hesitate to suspend operations when it would be profitable to do so, because of the serious effects on the employees and the community.

In spite of all these forces stimulating continued cutting, there is a considerable amount of equipment idle at all times. In 1917 the Forest Service estimated that the single-shift capacity of the West Coast mills was at least 60 per cent in excess of their actual production.[23] In this year the larger mills in this region operated to about 80 per cent of capacity, while the small mills averaged about 25 per cent of capacity.[24] In 1922 the larger mills produced about 95 per cent of one-shift capacity.[25] Much of this idleness was due to faulty equipment or bad management, but more of it to lack of markets.

The lumber industry is not characteristically an industry of large units. The largest company reporting to the association during 1919 to 1922 cut less than 180,000,000 feet of lumber per year, having a value of $4,561,493.40. For the companies reporting, the average gross return per company was $917,617.66 in 1919, $1,274,273.26 in 1920, $604,757.15 in 1921, and $837,625.84 in 1922. Probably three-fourths of the total number of mills had average gross receipts of less than $50,000 each per year.

While the small mills are much less regular in operation than the large mills, the difference in profits per thousand feet of cut is probably much less marked. The available evidence seems to indicate that there is but little relation between the size of a sawmill and the profits per thousand feet of actual production.

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[21] Long, George S., general manager, Weyerhauser Timber Co.: Interview, December, 1921.
[22] Pacific Lumber Trade Journal, October, 1910, p. 18.
[23] U. S. Department of Agriculture Report No. 114: Some public and economic aspects of the lumber industry, by William B. Greeley, p. 47.
[24] U. S. Department of Agriculture, Bul. No. 768: Production of lumber, lath, and shingles in 1917, p. 7.
[25] Computed from weekly barometer reports of production by the West Coast Lumberman's Association in Four L Bulletin, February, 1922, to January, 1923.

COMPETITION.

The cutthroat competition from which the lumber industry usually suffers arises in three ways. There is fierce competition between lumber and other materials, between the West Coast and other lumber-producing regions, and between the many mills in this region.

During the past 15 years other materials have come to be widely used where lumber or other timber products formerly supplied the entire demand. Paper roofing is now widely used in place of shingles. Steel, cement, and brick have, to a considerable extent, displaced lumber for construction purposes. Paper is taking the place of wood in the construction of boxes. The United States Forest Service estimates that during the past 15 years nearly one-fourth of the entire production of lumber has been displaced by other materials.[26]

The rapid expansion of the lumber industry on the West Coast about 20 years ago was made possible only by the depletion of timber in the Lake States. This gave West Coast lumber control of the markets in the Dakotas and eastern Montana. For over a decade there has been a considerable area between eastern Nebraska and Lake Michigan where southern pine has been in competition with West Coast lumber. This competition has led to severe price cutting at times, and first one and then the other has supplied these markets. At present West Coast lumber is able to meet southern competition in this region and is entering markets farther south and east. Fir is also entering the Atlantic coast markets in considerable amounts. In 1922 the water shipments to that market amounted to about 665,000,000 feet.[27] There will probably always be a border land, a "no man's land," where lumber can be secured from two or more regions and where regional competition will be important.

Equally or more important is the competition between mills in the same region. There are a multitude of small mills on the West Coast, many of which are poorly managed and have no adequate realization of costs or market conditions. Such mills tend to disturb the market and to cause wide price movements. In this respect the lumber industry is similar to agriculture, in that competition leads to a chronic condition of overproduction and low prices. There is no cohesion among lumber producers. In times of falling markets many companies try to obtain business by price cutting. This competition sometimes extends even to mills under the same ownership or to a mill and its sales agency.[28]

RESULTS OF FINANCIAL INSTABILITY.

While the unstable condition of the lumber industry on the West Coast has often resulted in lower lumber prices than would have come from better organization, yet the social and economic waste due to the conditions just described more than balance these gains. There is a very large amount of direct waste in the unused productive equipment. There is also an excessive drain made upon the forests during times of low prices. Timber is protected less carefully, reforestation is less desirable, while much timber which could be

[26] U. S. Department of Agriculture Report No. 114: Some public and economic aspects of the lumber industry, by William B. Greeley, p. 55 et seq.

[27] Data on regional competition was gathered by interviews with a considerable number of West Coast lumber producers, while the figure for 1922 shipments to the east coast is from the Four L News Letter, Mar. 15, 1923.

[28] U. S. Department of Agriculture Report No. 114: Some public and economic aspects of the lumber industry, by William B. Greeley, p. 50.

profitably utilized were prices high only increases the losses when prices are low. To get low prices now we are drawing upon the future timber supplies at an excessive rate. There is, moreover, the disorganization to the industrial life of a considerable region through the suspension of activities. From the summer of 1920 to the summer of 1921 the pay roll of the lumber industry on the West Coast probably decreased nearly 75 per cent; for the entire year 1921 it decreased by over 57 per cent. Wage payments declined by 40 per cent, volume of production by 30 per cent.[29]

Remedies for such a condition of the industry are by no means simple. Part of the problem is that of eliminating the business cycle. Part of it demands the elimination of the pressure of excessive stocks of timber held insecurely. It would be a decided element of strength to the industry if it did not have to carry timber far in excess of its actual requirements. Moreover, if the companies could strengthen their financial conditions so that they could stand a shutdown without financial embarrassment, they would be better able to protect their markets and to prevent the waste of material now prevalent. The final requirement of the situation is for more efficient marketing, preferably some sort of cooperative marketing.

A step in this direction was the formation of the West Coast Lumberman's Association in the summer of 1911 by the merging of the three earlier trade associations on the West Coast. In June, 1915, it extended its activities to include shingle production and organized a shingle branch. In 1918 its membership represented 86.2 per cent of the lumber production of western Washington and 75.6 per cent of that of western Oregon. In 1921 the Federal Trade Commission reported that the membership comprised over 200 firms and represented about 90 per cent of the entire West Coast lumber production.[30]

The association has been very active in establishing grading rules, trade customs, and a uniform accounting system, and in collecting and distributing information concerning lumber production, shipments, orders, and prices,[31] as well as in caring for the general welfare of the members.

The present disorganized and unsatisfactory conditions in the lumber industry seem to persist chiefly because of the difficulty of discovering and applying a remedy. While there are some temporary gains for the consumers from the present lack of system in the industry, on the whole the only one who will profit from the present conditions is the timber gambler. Timber owners, lumber producers, lumber dealers, both wholesale and retail, the United States Forest Service, the various schools of forestry, and to some extent the Federal Trade Commission are attempting to stabilize the industry. The movement seems to be in the direction of a closer cooperation of the various factors in the industry through the trade association. There will probably be increasing public assistance and supervision, but it will be of a constructive type and in the interests of a more stable and orderly development of the industry and a greater conservation of the timber resources of the region.[32]

[29] Data for decrease in wage payments are from Table 9; for volume of production are from the Four L News Letter, Jan. 15, 1923.

[30] U. S. Department of Commerce, Bureau of Corporations: Report on the Lumber Industry, vol. 4, p. 383 et seq.; Federal Trade Commission, The National Lumber Manufacturers' Association, Jan. 10, 1921, p. 57; Pacific Lumber Trade Journal, August, 1911, p. 26; January, 1912, p. 38; West Coast Lumberman, June 15, 1915, p. 22; April 1, 1918, p. 22.

[31] The prices collected are from records of actual past transactions, and these are made available to the public

[32] Further reference to some aspects of this problem are made in Chapter XIII.

CHAPTER IV.—TECHNOLOGY.

The processes by which standing timber is transformed into finished lumber ready for the market are very fascinating in themselves, but in this study interest in them arises from their connection with the labor problems of the industry. The conditions under which it is necessary for men to live and work, the kind of work the men do, the way in which workers mingle—all these are of vital importance for an understanding of the labor problems. None of these can be known apart from some knowledge of the technology of the industry. For example, one must know something about the nature of the work they do before one can understand why workers in shingle mills are more favorably disposed toward radicalism than are workers in sawmills or why loggers are more radical than either.

The lumber industry is usually divided into five parts: (1) The ownership of standing timber; (2) logging, cutting, and transporting logs to the mill; (3) milling-saw, shingle, and planing mills; (4) wholesale distribution; (5) retail distribution.[1]

The sawmill is the center of the industry, and is closely connected with all the other operations. It is usual for the company owning the mill also to own the standing timber and to conduct its own logging operations. However, in the fir region there are a large number of independent loggers who sell their logs in the open market. They may own timber or buy stumpage. Some of the mills act as their own wholesalers, selling direct to retailers, while a few mills conduct retail yards. Nearly all mills do a retail business in the community in which they are located. However, there are few men employed in connection with timber ownership or lumber marketing, and these do not appreciably affect the typical labor problems of the industry. Accordingly reference to these activities is only incidental in the discussions which follow.

LOGGING.

Logging consists in the cutting of timber into logs and the transporting of the logs to the mill. There is but little choice permitted the logger with regard to the location of his operations. He must log where the timber grows, and as the timber is cut from one locality he must move to another. The rapidity with which a tract is cut over and the length of time required to grow a new crop makes the industry very transient. A single "side"[2] will cut about 65,000 feet of timber per day, or, on the average, about a half section per year. Most camps consist of two or more "sides," with a correspondingly greater cut. The camp must usually be established at the edge of a stand of timber and must follow the windings of streams in order to facilitate moving logs. The result is that the usual logging operation is at a considerable distance from town, and the crew must live at a considerable distance either from town or from their work. The usual practice is to establish a camp near the scene of the operations

[1] U. S. Department of Agriculture Report No. 114: Some public and economic aspects of the lumber industry, by William B. Greeley, p. 8.

[2] A "side" consists of a single yarder, with the crew and any other men necessary to carry on complete operations, including falling and bucking.

and to move the camp as cutting advances into the timber. The nature of the living conditions in these camps will be discussed in Chapter V.

The first operation of the logging process, aside from the establishment of the camp, is the preparation of logs for the mill. This consists of two or three operations—felling the timber, "bucking" it or cutting it into proper lengths for logs, and usually "knotting," or trimming off limbs and knots. This work is usually under the immediate direction of the head bucker, who works under the camp foreman.

FELLING.

The timber is felled by fallers, who work in pairs. The more experienced or head faller usually selects the trees to be felled and determines the direction and methods of felling. Sometimes, however, this is done by the head bucker. Care must be taken to avoid cutting immature or worthless timber, to prevent breaking in falling, and to place the timber in such a position that it can be most advantageously bucked and yarded. The fallers first notch the tree on the side toward which they desire it to fall and then finish the cutting with a crosscut saw. Heavy wedges are used to direct the fall. Except where the lean is heavy a pair of experienced fallers can usually place a tree about where they want it.

BUCKING.

After the tree has been felled it is next bucked into lengths suitable for logs. The head bucker marks off the log lengths so that there shall be a minimum of waste in trimming in the mill and so that the greatest value may be obtained from the tree. He takes account of the shape and size of the tree and the location of defects, as well as of the character of the logging and mill equipment and the demands of the market. The usual lengths for logs are from 24 to 40 feet, with longer or shorter logs to fill special orders or to save material. Logs are often cut over 100 feet long and sometimes up to 200 feet.[3] The buckers work singly and saw either from the top or the bottom of the log, depending on the position in which it lies. While a few experiments have been made with power saws for bucking, they have not come into general use. Usually after but sometimes before bucking, the limbs and knots are trimmed from the logs by a knotter, limber, or swamper. In some cases the logs are peeled and "sniped."[4]

YARDING.

After the logs have been thus prepared, their journey to the mill begins. The first step in this process is called "yarding." It consists in bringing the logs from their original positions to a central point, from which they may be moved by rail, water, or donkey engines. In ground yarding, the oldest and simplest kind of yarding, the logs are dragged on the ground. The ground-yarding engine, usually called a "yarder," is a steam engine mounted on a heavy sled. It has several drums, and sometimes cylinders as large as 12 by

[3] Many mills are equipped to handle logs up to 150 feet, and in 1909 a timber 214 feet long was cut in a West Coast mill.

[4] Sniping is the process of rounding the corners of the logs so that they will slide easily over obstructions. This is done only when the log is to be dragged on the ground.

14 inches, with compound gears. In preparing for work the yarder is set in the yard selected as advantageous for further transportation of the logs. A "straw" line, usually a three-eighths inch wire cable, is then taken out by hand for about a quarter of a mile in the direction from which the logs are to be hauled, passed through a block, and the end brought back to the yarder. Here it is made fast to a larger line, five-eighths or three-quarters inch, which is hauled out by the straw line through the block and the end brought back to the yarder. This heavier line, the "trip" line, is then made fast to the main hauling line, an inch and a quarter to an inch and a half cable. The trip line then hauls the main line out to the log which it is desired to bring in. The trip line is used after the log is brought in to haul the main line back, while the straw line is used only when it is necessary to move to another location. It is often necessary to pass the trip or the main line through several blocks in order to get the logs out of bad places or to prevent them from catching on stumps or other obstructions. The work of placing the yarder and setting the lines is done by the yarding crew under the immediate direction of the hook tender.

After the equipment is in place the logs are brought in by the yarding crew, under the direction of the hook tender. The crew usually consists of a hook tender, a swamper, a sniper, one or two rigging slingers, two or three choker setters, a chaser, a signal man, an engineer, a fireman, and one or two wood bucks. The swamper knots the logs and trims any brush which interferes with effective work. The sniper snipes those logs needing it. The choker setters place the chokers (wire slip loops) around the ends of the logs. The rigging slingers attach the chokers to the main line and detach them when the line returns. The chaser opens and closes the blocks to enable the log to pass them.[5] The signal man transmits signals from the men giving them to the engineer. The wood bucks buck and split wood for the engine. When oil is used for fuel, as is now being done to an increasing extent, the wood bucks and usually the fireman are unnecessary.[6]

Yarding may also be done by the "high-lead" system. This differs from ground yarding chiefly in that the main line passes through a block at the top of a high spar near the yarder. This spar is usually a tree, trimmed of limbs and the top cut out, from 100 to 200 feet high. The spar is stayed with 6 to 10 guy wires. For distances up to 600 feet or more the high lead lifts the end of the log off the ground and so keeps it from catching on obstructions. It is also possible to haul several logs at one haul and at greater speed. No sniper is required. However, to prepare the spar tree and set the lines a high climber is necessary. The larger capacity of this system makes a loading engine advisable when the yarder is situated at the rail head. The larger capacity has resulted in the rapid adoption of high-lead systems.

A third type of yarding, the overhead system, has also found much favor since its introduction 10 or 15 years ago. The characteristic feature of this system is the use of a stationary or "standing"

[5] These blocks are so constructed that they may be opened and the line removed from them, so as to facilitate hauling past them.

[6] For further description see U. S. Department of Agriculture Bul. No. 711, Logging in the Douglas fir region, by W. H. Gibbons, pp. 74–94.

line, stretched from the top of a "head spar," similar to the high-lead spar, to a "tail spar," a similar spar out at the farther edge of the tract from which logs are to come. The standing line is held taut by one of the drums on the engine and on it runs a carriage to which is attached the block through which the main line runs. The outer end of the "outhaul" line is also attached to the carriage. This line runs through a block on the tail spar and is used to haul the carriage out for another load and to hold it from running in too rapidly when the load is being hauled. The trip or "slack-pulling" line pulls the main line back to the log to be reached. After the main line is attached to the chokers, the outhaul is held taut and the main line draws the logs directly under the standing line and then lifts the end of the logs off the ground. The outhaul is then released by a braking device so that the carriage moves in toward the head spar slowly enough to permit the main line to keep the end of the logs off the ground. When the logs reach the landing the main line is released and the logs fall to the ground. The chaser then removes the chokers from the logs, while the outhaul and slack-pulling lines haul the carriage and main line back for another load. By this method several logs may be moved at once, and the speed of the haul is greatly increased. Moreover, a much larger area may be yarded at one setting than by any other method.

It is the general practice to yard directly to the rail head, but in some places, particularly west of the Coast Range, this is not always practicable, either because of the broken nature of the ground or the cost of railroad construction. In such cases other engines are used to bring logs from the yarder to the railroad. Sometimes a road is built, usually by laying three logs together to form a V-shaped trough in which the logs are hauled. Where such a road is constructed the further transportation is called "roading," but where no road is constructed it is called "swinging." Roading is usually done by an engine similar to a ground yarder but with greater speed, while swinging may be either ground or overhead. Overhead swinging is common on broken ground. The crew of a roader or swing donkey usually consists of the engineer, fireman, wood bucks, and one or two chasers to hook and unhook chokers.

LOADING AND TRANSPORTATION.

At the railroad the logs are loaded onto cars, usually by lifting them into the air and letting them down onto the car. The loading line runs through a block at the top of a spar, and is connected to the log by chokers or grab hooks. The yarder, or roader, or a special loading engine furnishes power. Where the haul is to be either wholly or in part over a common carrier railroad the logs are placed on ordinary flat cars, but where the entire haul is over a special logging railroad a special type of log truck is used. Logs are fastened on the cars by means of stakes or chains, or both, but in spite of this many logs are lost off the cars before they reach the mill. Sometimes logs are hauled by rail for 100 miles or more. In many cases the railroad delivers the logs directly to the mill pond; in other cases the logs are delivered by the roads to storage booms, where they are made up into rafts of about 200,000 feet each and taken to the mills by steam or gasoline tugs.

SAWMILL.

From the mill pond the log is brought into the mill, usually being drawn up an inclined way, by means of an endless chain with sharp fingers set into cross blocks at frequent intervals. The fingers catch the log and hold it while the chain draws it up. A boom man sorts the logs in the pond and brings them into position where the fingers will catch them and bring them into the mill. When they reach the second story of the mill the logs are rolled from the logway to the log deck, where they are "scaled"[7] by the deck man, and then await their turn for sawing. The logs are here moved by a log turner equipped with arms which catch the log, turn it into any position desired, and push it onto the carriage or turn it on the carriage. It is controlled by the sawyer.

HEAD SAWING.

When the log is rolled onto the carriage it rests against movable rests, known as "head blocks," and is fastened against the blocks by means of hooks or "dogs," which are inserted by a "dogger." The head blocks are moved by machinery under control of the setter, who, acting under the orders of the sawyer, moves the log forward to adjust the size of the cut to be made. The cutting of the log is under the control of the sawyer, who determines the way in which it is to be cut, and controls the movement of the carriage.

The log is carried by the carriage past the head saw, which cuts off a board. The sawyer then brings the carriage back to its original position, the setter moves the log forward, and the carriage moves forward again and another board is sawn from the log. The sawyer must be familiar with the capacity of his saw so that he can get the maximum work out of it without crowding it so that it heats and either breaks or makes a poor cut. He must also know how to get the most out of his log, so that he can secure the better grades, as the constant aim is to secure the most valuable rather than the most bulky product. He must be familiar with market conditions and current orders so that he will not waste material.

The head saw or "head rig" is usually a band saw. The common type of head rig is an 11-foot mill, which usually uses a saw 17 inches wide and 65 feet long, running over two 11-foot wheels. The power is applied to the lower wheel and the saw cuts as it moves downward. Such a saw will cut through a log at the rate of 600 lineal feet per minute when the saw is running at a rim speed of 10,000 feet per minute.[8] In actual practice the saw is seldom fed more than 200 feet per minute. The saws are cared for, sharpened, and kept in condition by the filer. Something of the skill required in this job is shown by the fact that there are few uses to which steel is put where it is subjected to such strains as in a heavy type of band saw. The filer is the highest paid man in the lumber industry outside of the executives and foremen.

The log is usually only partly cut into lumber on the head rig. Slabs are first cut off, then the clear lumber near the surface of the log is cut into boards or cants, and then the common lumber in the

[7] Scaling consists in measuring the length and diameter of the log to determine its contents.
[8] Armstrong, E. B., editor "North American Filer" section of the West Coast Lumberman: Interview June, 1922.

interior of the log is cut into cants or timbers. After a slab and a few boards have been cut from the log the dogs are removed and the log is turned onto the flat side by the log turner. Then another slab and more boards are cut off and the log is turned again. Sometimes the log is turned a half dozen times or more before being completely cut. After the slabs and boards are sawn by the head rig they are turned down onto their side by an off-bearer or tail-sawyer, and then move on "live rolls" or transfer chains to other parts of the mill for further cutting.

SLASHING.

The slabs go from the head saw directly to the "slasher," a number of crosscut circular saws set about 4 feet apart, where the slab is moved against the saws by moving chains and cut into 4-foot pieces. The best of these pieces are sometimes sorted out to be made into lath, while the rest are carried by an endless-chain conveyor to the refuse burner or to a fuel pile.

EDGING.

The boards from the head rig go to the gang edger where they are ripped into the desired widths and trimmed of uneven edges. Some edgers are able to take pieces 12 by 72 inches and in a few cases 80 feet long. The saws are set on an arbor in such a way that the distance between the saws may be adjusted by the edgerman to make cuts of any desired widths. The edger man must know grades and orders or he may waste a great deal of material.

GANG SAWING.

The cants, pieces intended for further sawing, are sent either to a pony or a gang. Some mills have one, some the other; possibly some mills have both. The pony is a smaller rig of the same general nature as the head rig. From it the boards may go either to the edger or to the trimmers. The gang consists of a number of reciprocating saws set in a single frame and moving up and down as the cant is moved through them by top and bottom rolls. The gang may be large enough to take cants 18 by 60 inches at a speed of 15 lineal feet per minute. The lumber is cut by the gang to even widths and thicknesses and seldom requires edging. Usually the cants are cut to a thickness just equal to the width desired for the finished lumber and then are stacked to run through the gang.

TRIMMING.

After lumber has been cut to width and thickness by the head rig, pony, gang, or edger, it is trimmed to proper lengths and defects cut out. Sometimes trimming is done with a single swing saw, but usually the lumber is sent to an automatic trimmer. This consists of a set of saws set at 2-foot intervals, with all the saws except those at either end so arranged that by a movement of a lever by the trimmer man they may be raised or lowered, so that the boards may be cut to any length desired. Here, as in the case of the head or pony sawyer or edgerman, the trimmer man must know grades and orders in order not to waste material or to cut it to lower grades than is necessary. The lumber is moved against the saws by endless chains, and one or two men are stationed at these chains to see that the lumber is kept straight and is separated so that only one piece will be trimmed at a time.

GREEN-LUMBER SORTING.

From the trimmers the lumber moves on out of the mill on transfer chains into the sorting shed, commonly referred to as the "green chains." Here the lumber is carried for a considerable distance on the chains so that it can be sorted for transportation to different parts of the plant or yard. Near the trimmer stands a "chain marker" who marks on each piece the disposition to be made of it. Green-chain men are stationed at short intervals along the chains to pull off the lumber and load it onto trucks or carriers for transportation to various parts of the plant. Some of the lumber moves directly from the chains to the feed table of a timber or dimension sizer, which planes one side and one edge or more of the green lumber to reduce it all to the same size. Other pieces, particularly the clear lumber, goes to the dry kiln, sometimes falling from the chains to the cars on which it is moved into the kilns. Other pieces are taken to the storage yards or directly to the place for shipment.

KILN DRYING AND PLANING.

Except for the dimension and timber sizing, most of the lumber is kiln-dried before going to the planers, and then it is only the clear lumber or shop grades which are dressed. The clears are sent through fast-feed matchers and made into flooring, siding, or ceiling, or dressed on all four sides for finish, casing, shelves, and similar purposes. Many mills have molding machines which utilize the narrow strips. After passing through the planers the lumber is trimmed and graded, and then all except the finish is made into bundles, usually of six pieces, after which it is taken to a storage shed to await shipment.

DISPOSITION OF WASTE.

The waste material of the mill is usually used for fuel or burned. Nearly every mill generates its own power, and some of them sell power. Sawdust from the larger saws is usually conveyed directly to the furnaces by conveyors, while sawdust from the smaller saws and planers is collected by vacuum collectors and conveyed to the furnace by pipes. In many mills this is not sufficient to provide power, and slabs from the slasher are burned or a "hog" is installed, which grinds up the waste material to facilitate feeding it to the furnaces. Waste which is not needed for firing is sold for fuel or burned in a fire pit or burner to dispose of it.

POWER.

Power is usually supplied by a battery of furnaces and boilers which furnish steam for the engines, from which the power is transmitted to the machines by belting and shafting, although some machines receive their power in other ways. The log turner is supplied with steam direct to its cylinders and some other machines use steam directly. Several of the larger machines have separate engines, particularly the carriage, head rig, pony, pony carriage, and edger. More recently the better mills have been installing generators in the power house and furnishing each machine with an individual motor. This has the advantage of permitting a more satisfactory adjustment of power to meet the peak loads required at each machine, since an electric motor will stand more overloading than a steam engine.

INSPECTING, GRADING, AND TALLYING.

In addition to the men who actually handle the lumber or run the machines there are a number of inspectors, commonly called graders or tallymen, who grade and tally the lumber. All lumber must be sorted for grades, as there are a large number of different grades into which it is classified, and it must be tallied as it is shipped to provide for shipping the right amount. Most of the cargo mills on the West Coast have united to form the Pacific Lumber Inspection Bureau, commonly called the "P. L. I. B.," which furnishes tallymen who inspect, grade, and tally all lumber shipped from their mills by water. The bureau is gradually extending its inspection to rail shipments. The tallyman inspecting the shipment must first be approved by the bureau representative and then he must make affidavit before a notary of the correctness of grade and tally. This affidavit and the approval of the bureau representative are attached to the invoice. The P. L. I. B. certificate is generally accepted among buyers and sellers of lumber as the highest possible assurance of correct grades and quantity.

SHINGLE MILLS.

Shingles are not usually manufactured in close connection with lumber manufacture, although some lumber mills have shingle mills in close proximity. In such cases the shingle mills are usually in the nature of by-product plants, using cedar which is not suitable for lumber. Shingle mills may use either logs or "bolts," the latter being cut 4 or 5 feet long, depending on the kind of shingle to be made, and split to about 16 inches thick. When logs are used they are sawn on the mill floor by a drag saw, a heavy power crosscut saw, into shingle lengths, from 16 to 24 inches long, and then split to about 16 inches thick. When bolts are used they are sawn to shingle length by a circular cut-off saw. After the blocks are thus prepared they are sometimes "bolted" or trimmed smooth on the split sides. In bolting the block is placed on end on a small platform and the platform is carried past a large circular saw which trims the face of the block to a flat surface. From the bolter the block goes to the shingle machine.

The shingle machines cut the blocks into shingles. These machines are of two types, upright and horizontal, so called from the position of the saw and the block during sawing. The latter is the earlier type and is arranged to take from 1 to 10 blocks at a time. In this type of machine the block is laid on one of its faces into a frame which moves over the face of the saw, carrying the block past the saw. At each trip of the carriage the saw takes off a shingle, which falls into a pit below the machine. In the 10-block machine there are 10 block-carrying carriages and several saws. The blocks move in a circle and each saw takes off a shingle from each block. The sawyer must place the blocks in the machine and when a block is cut to perhaps 2 inches wide he takes the "spault" out and places in another block. He does not stop the machine in these operations and sometimes loses a finger or hand if he is not careful. With the horizontal machine one or more knot sawyers are needed to trim the edges of the shingles and cut out bad knots or other imperfections. In the upright machine the block stands upright and is moved backward and forward past the saw, which cuts off shingles as it goes. The

sawyer must take in his left hand these shingles as they are cut and then trim them on a vertical saw at his right. As his eye is usually on the knot saw, it is very easy to lose all the way from a finger nail to an arm in the shingle saw. Few men have sawn shingles for any length of time, particularly on an upright machine, without paying toll in a part or all of a hand.

After the shingles are sawn and trimmed they are thrown into bins, from which they are taken by packers and packed into the familiar bundles. After packing they are usually taken to a dry kiln for drying to reduce weight and freight rates.

The accident rate in the shingle mills is unusually heavy, due to the danger of shingle sawing. In addition the cedar dust is seldom collected by fans, and a very large proportion of the workers contract cedar asthma. The shingle mills are usually quite small, sometimes with only one or two sawyers or packers, and seldom with more than 10 or 12 of each. There are few other men about the mill, so that it is the exceptional mill which employs as many as 25 men.

CHAPTER V.—EXTENT AND CAUSES OF LABOR UNREST.

One of the surest signs of a contented labor force is a low labor turnover. If men are happy and contented with their work they will stay with it; if they are restless and discontented they will move on to another job. Where labor conditions are satisfactory turnover is low and many men stay year after year. On the other hand, a high rate of turnover indicates something wrong with the plant.

EXTENT OF LABOR TURNOVER.

In the West Coast lumber industry the labor turnover has usually been very high, although, like so many other aspects of the situation, adequate figures on the subject are hard to find. In December, 1921, the manager of a sawmill with an annual production of nearly a hundred million feet of lumber, on being asked what his labor turnover was, stated that it was about one-half of 1 per cent per month. A few minutes later this manager was complaining about the difficulty he had in holding his yard crew. Perhaps he meant that his turnover was 50 per cent instead of one-half of 1 per cent. More likely he had no data whatever, but wanted to make a good showing. A few mills have made careful turnover studies. Four Oregon mills report that during the three years, 1919, 1920, and 1921, the average number of separations was 703 per mill per year, while the average working force per mill was 343, indicating a turnover of about 205 per cent. Five Washington mills during the same period had an average yearly turnover of 266 per cent—397 separations with an average crew of 149.[1] There was probably little labor trouble in these mills during this period. Had figures been available for the years 1917 and 1918 they would undoubtedly show a much larger rate of turnover, particularly for the six months preceding the shortening of the workday. It is generally admitted that the turnover ran from 500 to 1,000 per cent per annum during that period. One company operating both mill and camp reported that in February, 1918, it hired five men for each man on the pay roll.[2] In 1911, at a time when jobs were not overly plentiful, the writer had experience with a job for which seven men were hired within a week in order to keep one man at work. At the other extreme is the experience of a plant in Oregon which was shut down from January, to December 1, 1921, and resumed with all of the old crew except one man who had gone into business for himself.[3] In 1915 the Federal Industrial Relations Commission estimated that the annual turnover in the logging camps was about 500 per cent[4] while records of a Washington camp for the years 1919 to 1921 revealed an annual turnover of 564 per cent, the average crew being 117.[5] While there is little data as to the cost of turnover in this

[1] Four L Bulletin, April, 1922, p. 35.
[2] Idem, February, 1922, p. 8.
[3] Four L Bulletin, January, 1922, p. 40; February 1922, p. 8; Interview with A. C. Dixon, general manager of the Booth Kelly Lumber Co., May, 1922.
[4] U. S. Commission on Industrial Relations: Final Report, p. 167
[5] Four L Bulletin, March, 1922, p. 7

industry, on the basis of studies made elsewhere it has been estimated that the cost would average $75 per replacement, counting all men in the organization, with common labor getting $3 per day.[6]

CAUSES OF LABOR TURNOVER.

The causes of this turnover are many and ramify through all the relations of workers and owners in the industry. Some turnover is inevitable in any industry, due to sickness, accident, death, old age, promotions, removals, family affairs, etc. Some of the turnover is peculiar to this industry but inevitable in it. Men find it too exacting to continue working indefinitely in some of the extreme weather of the region, and leave to rest up or to dry out. Rain even when it reaches a precipitation of 4 or 5 inches per day, does not hinder operations in mill or camp until something washes away. High wind will stop logging. Snow also interferes with it, but only rarely is there snow enough to interfere with operations except well up in the mountains. There is also a considerable amount of idle time due to breakdowns or necessary repairs. All of these result in increased turnover. It has been estimated that 20 per cent constitutes the minimum turnover for any length of time.

There has been for years a very general and deep-seated belief on the part of the workers that much of the turnover has been deliberately encouraged by the employers. The conviction is very general that many foremen have an arrangement with some employment agency for splitting the fee. In such cases the foreman will not hire a man who does not have a ticket from the proper employment agent even though he is in need of men, while he will hire a man with such a ticket even though it be necessary to discharge a satisfactory workman to make room for the new man.[7] Another alleged reason for encouraging turnover is to prevent organization of the crew. There is a very general distrust of the I. W. W., and while most employers will not discharge a man for carrying an I. W. W. card, some will, and most of them will discharge any labor agitator. Another reason why the employer may look with complacency upon a large turnover is pointed out by Paul H. Douglas in an article in the American Economic Review for June 1918 (pp. 308–316), on "Problem of labor turnover." He remarks that a large turnover may be profitable when it is the result of excessive exploitation of labor, wearing out the worker, discarding him, and getting another. It is probable that in some of the mills and camps this is the explanation of most of the turnover.

Professor Ogburn of the University of Washington states that the chief causes of labor unrest in the industry are: (1) Long hours; (2) low wages; (3) unsanitary camps; (4) lack of family life; (5) absence of community life; (6) unsatisfactory working relationships with foremen and superintendents; and he states that these are of importance nearly in the reverse order to that in which they are mentioned.[8] These causes will be taken up in turn.

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[6] Four L Bulletin, February, 1922, p. 6 et seq., "What does labor turnover cost," by F. B. Gibson.

[7] Timber Worker, August, 1913, p. 1; Feb. 1, 1915, p. 3; U. S. Industrial Relations Commission, Testimony, vol. 5, pp. 4581, 4768, 4939, Washington, 1916. Extensive conversations with employers, employees, and others in 1921–22, revealed a very general belief that such a practice is common to-day.

[8] University of Washington Forest Club Annual, 1918, pp. 11–14. "Causes and remedies of the labor unrest in the lumber industry," by Wm. F. Ogburn.

HOURS OF LABOR.

Ten hours was the standard working-day in the lumber industry almost from its inception, although in some operations longer or shorter days were worked. In 1909, of the 58,815 employees in the lumber industry in Washington and Oregon, 55,868 worked 10 hours per day, 2,340 less than 10 hours, and 607 over 10 hours.[9] While there had been dissatisfaction with the 10-hour day for many years, it was not until 1917 that it really assumed important proportions. The great strike that summer was chiefly for the 8-hour day, and it was not until the day was shortened to 8 hours on March, 1, 1918, that it was possible to quiet the unrest at that time. Since it first went into effect there have been few deviations from that norm. In April, 1922, a survey of the camps and mills on the West Coast showed that of 749 operations only 15 were running over 8 hours.[10]

WAGES.

Wage rates have created labor unrest chiefly when wages have been decreased or when prices have risen, or on account of the wage spread between adjoining plants. Each of these conditions has been frequent enough to cause considerable dissatisfaction. In February, 1923, the wage spread between the Centralia and Grays Harbor districts, about 50 miles apart, for laborers was $1.25 per day, the wage being $3 in the former and up to $4.25 in the latter. At that time the going wage on the West Coast was about $3.80 per day. While this spread is probably above the average, there has usually been considerable variation in wages from plant to plant.[11]

Definite data as to the usual wage level are difficult to find except in isolated cases. The United States Bureau of Labor Statistics has collected some wage data for workers in the lumber industry for various periods since 1904, but these data are far from complete since 1914. The average earnings per hour of laborers in the lumber industry in Washington in specified years, from 1904 to 1921, as compiled from the wage data of the bureau,[12] were as follows:

	Cents.		Cents.
1904	17.72	1911	20.83
1905	17.91	1912	21.24
1906	20.39	1913	22.89
1907	21.87	1915	20.20
1908	17.65	1919	51.70
1909	19.27	1921	40.70
1910	21.08		

Before March, 1918, except in the shingle mills, wages were entirely a matter of individual bargaining, and the employer raised or lowered wages according as he thought men were scarce or plentiful. Since that date the Four L[a] has set wage rates which have had a wide influence on the going rates in most of this region. While the Four L rates have applied to nearly all workers, skilled and unskilled, only the rates for unskilled labor will be here considered. In March, 1918, the first wage rate was set at 45 cents per hour, and six months later it was raised to 50 cents. These rates were maxi-

[9] U. S. Census Bureau. Census of 1910, The Lumber Industry: p. 14.
[10] Four L Bulletin, May, 1922, p. 12.
[11] Idem, March, 1923, p. 13.
[12] U. S. Bureau of Labor Statistics Bul. No. 65, p. 166; No. 77, p. 175; No. 129, pp. 32, 33; No. 153, pp. 37, 38; No. 225, p. 34; No. 265, p. 359; and No. 317, p. 21.
[a] Four L is the usual way of referring to the Loyal Legion of Loggers and Lumbermen.

mums, designed to keep down turnover, and during most of the time they were also the going rates. In July 1919, the Four L set a minimum wage of 45 cents per hour, and a month later it was raised to 50 cents. On February 1, 1920, another advance of 5 cents per hour was made. On January 1, 1921, the minimum was reduced to 45 cents and on June 1, 1921, it was further reduced to 37.5 cents per hour, at which figure it still stands (spring, 1923). These minimum rates have been the going rates only from the fall of 1920 to June, 1922.[13] At present (spring, 1923) the most common wage rate is probably about 47.5 cents per hour. The following statement shows the common range of wages per 8-hour day for laborers in the various districts of the West Coast as of March 1, 1923.[14]

Coos Bay	$3.60
Willamette Valley	$3.20–3.60
Columbia River	3.60–3.80
Willapa Harbor	3.65–3.80
Centralia–Chehalis	3.00–3.40
Grays Harbor	[15] 3.65–4.25
Tacoma, Olympia	3.80
Seattle	3.80
Everett	3.90
Bellingham	3.80

No exact figures of yearly earnings are available, and we must depend on estimates of the amount of time worked. In 1915 the average time worked by laborers in the lumber industry in Washington, as shown by data compiled by the United States Bureau of Labor Statistics, was 19.47 days per month, while in Oregon, it was 18.55 days.[16] Such estimates as are available agree in placing the yearly earnings at about three-fourths, or a little less, of the amount the men would earn if they had no lost time.

INSANITARY CAMPS.

A third cause of unrest is the unsanitary type of camps in which men in the logging industry must live. Few of the camps are so arranged that the men can live at home. In a few cases the company provides transportation to and from the job each day to men who desire to live at home, while in other camps a few cheap cottages are built for married men, but even here the lack of school facilities near by makes it impossible to raise a family near the camps. Accordingly nearly all of the employees live at the bunk house in the camp and eat at the cook house. For most of them there is no alternative.

The bunk houses furnished for the loggers have seldom been all that could be desired, although at present they are very much better than they were before 1917. A mass of testimony before the Industrial Relations Commission concerning conditions in the camps has been thus summarized:

> Forty loggers occupied a bunk house that should not have accommodated more than a dozen—the men sleeping two in a bunk, with two more in a bunk on top; a stove at either end, sending the steam rising from lines of wet clothes strung the length of the room; beds made in many cases by dumping hay into a wooden bunk; food that was unsavory; the crudest kind of provisions for cleanliness and sanitation.[17]

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[13] West Coast Lumberman, Mar. 15, 1918, p. 34; Sept. 15, 1918, p. 30 et seq.; Four L Bulletin, June, 1921, p. 22.
[14] Four L Bulletin, March, 1923, p. 13.
[15] One mill paying $4.25.
[16] U. S. Bureau of Labor Statistics Bul. No. 225, p. 63.
[17] New Republic, Sept. 29, 1917, p. 242.

Dr. W. N. Lipscomb reported that he found—

One bunk house holding 80 men with no ventilation except a door in either end. * * * At night the men hang up their clothes, build a hot fire, close all the doors, and sleep under groundhog conditions.[18]

Professor Ogburn reported that of the large number of camps he inspected during the winter of 1917–18, one-half had wooden bunks, one-half had bedbugs, one-third had bad toilets, and only one-half had showers, while as a rule the camps had about one-half the requisite amount of air space and one-third the window area required. The men nearly all furnished their own bedding.[19]

The chief complaints of the men concerning the bunk houses is with regard to cleanliness and provision for drying clothes. The bunk houses are usually poorly built and at best are hard to keep clean, while often there is little care given them. The work which the men do is usually very dirty and often, perhaps a third of the time, the men come in covered with mud and thoroughly wet. They have to clean up in the bunk house, and usually get it fairly dirty in so doing. Clothes need frequent washing, and if there is no suitable place to dry clothes they must be dried in the men's living room. Under the best of conditions it is difficult for the men to keep a room clean unless they have another room for washing and drying clothes. But conditions are not the best. Many of the men have not been used to cleanliness and care little for it. It is still common for loggers to carry their bedding with them, although many camps now furnish bedding. At the best the bedding is not overly clean, at the worst it is indescribable. Bugs are common in camps, and little provision is made to prevent spreading of disease. The men charge the management with lack of provision for cleanliness; the management charges that the men will quickly permit a clean camp to become filthy. Both are partly to blame. Some managers make scant provision for the men; some men refuse to care for clean camps when they are provided. There is no question that conditions are at present vastly better than they were six years ago, but they are still far from satisfactory. The I. W. W. has been carrying on a campaign for better camps and one of the demands in the strike of April and May, 1923, was for clean camps and for the furnishing of bedding.[20] (See Chapter XII.)

Complaints about the board furnished in the camps have concerned both the quality of the food furnished and the conditions under which it is prepared and served. A few years ago a screened kitchen or dining room was rare, while open latrines and garbage piles were usually near by. Little attention was paid to any kind of sanitary arrangements. It was common for cooks or waiters to be suffering from tuberculosis or other communicable diseases.

There has seldom been any complaint about the quantity of food served in a logging camp. It is the custom to place all the food on the table and to permit the men to help themselves. Serving dishes are kept supplied until everyone has finished. This results in large waste, but seems to be the only way to insure that the men have enough. The average logger requires from 5,000 to 8,000 calories per day, as compared with the normal adult requirement of 3,500 or the Army ration of 5,000.[21] The quality of food is usually

[18] West Coast Lumberman, Nov. 1, 1917, p. 39.
[19] University of Washington Forest Club Annual, 1918, pp. 11-14. "Causes and remedies of the labor unrest in the lumber industry," by Wm. F. Ogburn.
[20] Industrial Worker, Seattle, during January, February, and March, 1923.
[21] Timberman, November, 1914, p. 43.

about the same as that served in the better class of workingmen's homes. Variety at any meal is usually large, but the meals are very much alike. The Department of Home Economics of the University of Washington made a study of camp menus and found that the typical bill of fare was about as follows: [22]

Breakfast.—Cooked cereal with milk and cream, bacon or chops, eggs, biscuit, potatoes, milk or coffee, doughnuts, and hot cakes.

Dinner.—Two kinds of meat, three vegetables, potatoes, pastry, pie, cake, puddings, cookies, milk, coffee, tea, two kinds of bread.

Supper.—Meat, usually steak or chops, cold meat, potatoes, two vegetables, very often fruit and pastry.

While such a menu seems to offer variety enough, yet the men are such hearty eaters that they may eat some of nearly everything on the table each meal. In such a case the food may soon seem to lack variety, and the men move on to another camp to secure a variety of food. There they find the same kind of food but prepared or served differently.

LACK OF FAMILY AND COMMUNITY LIFE.

Some of the most careful students of labor unrest in the industry hold that the more fundamental causes of unrest lie below the surface even of the workers' thought. Chief of such causes are the lack of family and community life in the camps and the unsatisfactory relations between workmen and foremen.[23] Ogburn found about 5 per cent of the men in camps had wives living at the camps, while not more than 5 per cent more had wives in the near-by towns.[24]

There is practically no provision made for organized recreation at the camps, except in the few places where the Y. M. C. A. has been established. The men are away from home and ordinary social environment. They spend much of their time about the fire in the bunk house, playing cards or discussing all kinds of topics, from sports or scandal to abstruse discussions of economic theory. Here they have the time to think and talk over their grievances and the differences between their social and economic conditions and those of other elements of the population. It is in these discussions that the opinions of the loggers are formed, and here nearly everything combines to make them radical. There is little that is attractive in the lives they lead; they resent the social organization which makes that kind of a life necessary. Of course, in the sawmills the men are not so closely associated during their hours off duty, and there is less of latent dissatisfaction with what life offers, less of psychological foundation for revolt.

UNSATISFACTORY RELATIONS WITH FOREMEN.

In most cases men are chosen for positions as foremen on the basis of their knowledge of machinery or technique rather than of their ability to handle men. Accordingly, it is common to find

[22] Journal of Home Economics, June, 1921, pp. 241-245. "Food in the lumber camps," by J. R. Muller.
[23] See especially "Causes and remedies of the labor unrest in the lumber industry," by W. F. Ogburn, in University of Washington Forest Club Annual, 1918, pp. 11-14: "The I. W. W.," by Carleton H. Parker, in The Casual Laborer, and other Essays, New York, 1920, p. 103.
[24] University of Washington Forest Club Annual, 1918, pp. 11-14. "Causes and remedies of the labor unrest in the lumber industry," by W. F. Ogburn.

that the foreman has little understanding of or sympathy with the feelings and prejudices of his men. Men are often treated as so many machines, without regard to their personalities. This leads to sullen resentment, and as soon as possible the man leaves the plant. A few such experiences and he comes to feel that all foremen are slave drivers, with no interest in their men. Another feature which increases the dislike of workers for the foremen is what the workers call "highballing." This consists usually in crowding the workers to as rapid a pace as possible. It is usually most common in connection with yarding in the logging camps, although it is by no means unknown elsewhere in the industry. In yarding the hook tender speeds up the work by example and by giving signals to the engineer to go ahead before the men are entirely ready. This may greatly increase the hazard of a business dangerous at best, and probably does increase the accident rate. The employers claim that it is necessary on account of the growing inefficiency and laziness of the workers, who are now much less efficient than formerly. But in general it seems to be the employers with the least satisfactory labor policy who complain most about labor inefficiency.

Another cause of labor unrest closely associated with the unsatisfactory working relations with foremen is the feeling on the part of the workers that they should have some voice in the determination of some of the conditions of their labor, particularly those aspects of their work with which they are best acquainted. Except for the radicals, there seems to be little desire on the part of either loggers or mill hands for control of questions of company finance, timber buying, or lumber marketing. They do want a voice in the management of production and with regard to questions of wages, hours, and working conditions. Here they feel that they are not considered or treated as human beings. Of course, there is a vast difference between workers and between plants, but the feeling here indicated is very widespread.

As a result of these various causes of unrest there gradually grew up in the industry two hostile camps, the employers and the employees, who knew little or cared little of each other's point of view. In Chapter VI the psychology of the laborers as it has developed is studied, and the remaining chapters show how it has worked out.

CHAPTER VI.—THE WORKERS.

NATIONALITY OR RACE.

Most of the employees in the lumber industry on the West Coast are Americans or Scandinavians, although there are a few men of other nationalities, usually in the unskilled positions. The most careful study of racial distribution of the workers was that undertaken by the Washington State Bureau of Labor in 1913. The distribution of workers in the Washington mills, including shingle mills, and in logging camps, in 1913, by race, as shown by that study [1] is as follows:

	In mills.	In camps.
Natives and north Europeans	18,066	5,376
South Europeans	1,224	364
Asiatics	1,248	12
Total	20,538	5,752

Wage data were also collected for the three race groups, and it was found that in the sawmills the south European and Asiatic workers were 15.6 per cent of the total number employed, but that they held only 2.3 per cent of the jobs which paid over $2.50 per day.[2]

SKILL AND WAGE LEVELS.

The kinds of skill required in the various jobs in the lumber industry, in camps and mills, has been indicated in Chapter IV, but a few additional words may well be said here. The Washington State bureau of labor investigation of wages in 1913 disclosed that most of the men in the industry were receiving close to the lowest wages paid. Some summaries of the data are given in Table 12.

TABLE 12.—DAILY WAGES[a] IN THE LUMBER MILLS AND CAMPS OF WASHINGTON, 1913[b].

Item.	Mills.			Logging camps.
	Saw.	Combination saw and shingle.	Shingle.	
Total employees	13,543	4,243	2,752	5,752
Daily wages:				
Lowest	$1.75	$1.75	$2.00	$2.00
First quartile	2.25	2.50	2.75	2.75
Median	2.50	2.75	3.50	3.25
Third quartile	3.00	3.50	4.25	3.25
Highest	5.00	5.75	7.00	4.75
Average	2.69	2.95	3.59	3.09

[a] In most cases for 10-hour day.
[b] Washington State Bureau of Labor. Biennial report, 1913-1914, p. 34 et seq.

[1] Washington State Bureau of Labor. Biennial report, 1913-1914, p. 50. Comparison of these totals with the report of the 1910 census would indicate that data were collected from about half of the camps and perhaps three-fourths of the mills, but this should not seriously affect the conclusions. See U. S. Bureau of the Census. Census of 1910: Bulletin on the Lumber Industry, pp. 12, 13.
[2] Washington State Bureau of Labor. Biennial report, 1913-1914, p. 34 et seq.

The Washington study is probably defective in reporting the men who received very high wages, as there are but 156 men reported as receiving over $5 per day and 146 or more of these were in the shingle mills. The higher general level of wages in logging camps than in sawmills is due to the disagreeable features of life in the camps and the heavier nature of the work, rather than to any requirement of greater skill. The even distribution and high level of shingle-mill wages is due chiefly to the fact that considerable dexterity is required in the work and most of it is on a piecework basis.

In Table 13 is shown the normal wage rates for some of the higher paid positions in the mills and camps from 1912 to 1915, included in which is the period covered by the report just quoted. While there was some change in wage levels during this period, as shown on page 40, still it was not sufficient materially to affect the comparability of Tables 12 and 13.

TABLE 13.—USUAL DAILY WAGE RATES [1] ON THE WEST COAST FOR SOME OF THE HIGHER PAID POSITIONS IN LUMBER MILLS, 1912 TO 1915, AND IN LOGGING CAMPS,[2] 1911 TO 1916.[3]

Occupation.	Wage rates.		
	High.	Medium.	Low.
MILLS.			
Filers, band saws	$12.00	$10.00	$9.00
Sawyers, head:			
Band	8.00	6.50	5.00
Circular	6.00	5.00	4.00
Filers, circular saws	6.00	5.00	4.00
Foremen	6.00	5.00	4.00
Chief engineers:			
Electrical	6.00	5.00	4.50
Steam	4.50	4.00	3.50
Edgermen	4.75	4.00	3.50
Trimmermen	4.00	3.75	3.50
Resawyers	4.00	3.75	3.50
Graders (seasoning and storage yard)	4.50	4.00	3.00
LOGGING CAMPS.			
Hook tenders	6.00	5.25	4.50
Loaders, head	4.75	4.25	3.50
Locomotive engineers	4.50	4.00	3.75
Filers	4.00	3.75	3.50
Buckers, head	3.75	3.50	3.25
Fallers, head	3.75	3.50	3.25
Rigging slingers, head	3.75	3.50	3.25
Engineers, yarder and loader	.....	3.50	.....

[1] Per 10-hour day.
[2] The high and low wage rates given for logging camps do not represent extremes and the medium wage rates are average wages.
[3] Mill rates from Lumber Manufacture in the Douglas Fir Region, by H. B. Oakleaf, Chicago, 1920, p. 143 et seq.; camp rates from Logging in the Douglas Fir Region, by W. H. Gibbons, p. 10.

At present (October, 1923), the wage level is about 70 per cent above that prevailing at the time these figures were compiled.

SOCIAL VIEWPOINTS.

Cutting across all lines of race or skill, there are widely different social viewpoints held by the lumber workers. These attitudes toward life and society lie at the root of any and all labor problems. The first step towards an adequate understanding of these men is to classify them upon the basis of their social viewpoints, but in this connection it is necessary to remember that it is often impossible to fit any given individual into any possible scheme of classification.

In this attempt to classify labor types the basis chosen is the attitude of a man toward his job, although it will be necessary occasionally to take account of other significant differences.

While in general every job is taken and held because of the money made on the job, either as wages or otherwise, yet in many cases the worker may find enough pleasure in some job to induce him to accept it at lower wages than he would accept elsewhere. He may feel that in addition to the wages he receives for his labor there is in the work itself a chance for self-expression and so may take real pleasure in doing good work. While there are some men who feel something of the artist's interest and pride in their work, for the majority of workers in the mills and camps work is drudgery and endurable only because of the wages paid. For them, as some one has said, "work spells merely wages," or, in less poetical language, they are working for "a dollar a day and sundown." While these attitudes are determined partly by the kind of work done, this is by no means the whole story, as will appear when we consider the question a little further.

Since all men look upon their jobs as in a very significant sense a means toward an end, it is important to inquire as to the things they hope to secure as a result of their labor. An examination of lumber workers from this point of view shows the men have five quite clearly defined ambitions. Some of them think of their work as furnishing only a temporary help in securing something which has no connection with the work itself, as, for example, buying and clearing a farm. Another type of worker thinks of his job as a stepping stone to a higher position in the industry—as a training ground for an executive position or for ownership. A third and by far the most numerous type group consists of men who think of the job as furnishing the means to live as ordinary citizens and usually to maintain a normal family life. This group contains both those with and those without interest and pride in their work. The members of the fourth group have cast aside all social ties and obligations and seek in the job merely the means to live a self-supporting but essentially unstable life. In the last group we find those who have lost all touch with society and who work just enough to secure a stake to provide only for a mere animal existence, which stake will be supplemented from less respectable sources. Every industry has workers of all these types, but the conditions under which the lumber industry has developed on the West Coast have produced some interesting modifications of the groups.

THE STUMP RANCHER.

By far the most numerous and most characteristic representative of the first group just mentioned is the stump rancher, the man who is trying to make a farm out of a piece of logged-off land. As this land is usually covered with large stumps, brush, and logs, it takes a considerable period for him to clear enough of it to support his family, and as the typical purchaser of such land is usually short of capital he generally goes out to work for a few years to support his family, while he clears the land during his spare time. As the lumber industry is the most important source of jobs in the regions where stump ranches are common, the customary place for him to work is in a mill or camp.

While the term "stump rancher" applies strictly to a man who has bought logged off or stump land, the term is frequently expanded to include anyone who supplements a farm income by work in camps or mills. Before the Government land was exhausted some 25 or 30 years ago there were a large number of homesteaders who were psychologically and economically in very much the same position as the present-day stump rancher. On many of these homesteads the settler lived only long enough to secure title to the land so that he could sell it to a timber company, but on many others the settler dreamed of building for himself a real home. Many of these dreams were rudely shattered during the depression of 1893 to 1895, and to-day there are hundreds, if not thousands, of abandoned ranch houses in this region. To-day lumber companies attempting to market logged-off lands often offer to the settler work in their plant or a neighboring plant.[3]

It is a matter of great importance to the stump rancher that he find work near his ranch so that he can utilize all his spare time profitably. Accordingly he is willing to work for lower wages and under less desirable conditions than those who have no such interest. His attitude toward the job is determined by the fact that he expects to leave the job in a short time, while in many cases the loss of that particular job would mean the loss of his ranch. He is not willing to make any sacrifices to improve the condition of the employees in the industry; he feels that no possible improvement in the job can be worth a contest with the employer. The stump rancher is an individualist. Each man of this type has his private objective, and the only union in which he is interested is one to improve the breed of stock or to clear land. In a few cases he may be enlisted in a cooperative marketing or buying organization, but he is distinctly not interested in a labor union. He lives in a different world from that of the trade-unionist and each fails to understand the other. The stump rancher has little sympathy with the union and seldom has scruples against acting as a strike breaker. From the point of view of the employer the stump rancher is usually a very desirable workman, since he does not readily leave the job, he seldom complains of wages, hours, or working conditions, and on most questions he is inclined to take the point of view of the employer. Of course, he is apt to be somewhat irregular in his work, laying off at planting and harvest time, but such vacations are easily provided for. In some sections of the West Coast, particularly in the Centralia-Chehalis district and in the Willamette Valley, the proportion of stump ranchers is very high. In these districts some companies have as many as 75 per cent of the crew of this type. It is not merely a coincidence that these are low-wage districts.[4]

THE AMBITIOUS WORKER.

The second type group contains those men whom we are pleased to think of as having the typical American attitude toward industry. When he enters the industry the boy hopes some day to own the plant in which he works, and he endeavors to make his dream come

[3] In April, 1922, a lumber company announced that it was putting on the market 2,800 acres of logged-off land near Onalaska, Wash., and offered the purchaser winter work in its camps or mill. Four L Bulletin May, 1922, p. 26.

[4] See p. 41.

true. A great many of the employers in the industry have risen from the ranks, and the way is still open for a man of intelligence, energy, and ambition to rise from laborer to foreman or higher, although such opportunities are relatively less numerous now than formerly. Men with such ambitions take a great deal of interest in their work and attempt to give more than they are paid for in the hope of winning promotion. Their point of view is that of the employer and the Hoo-Hoo, a fraternal organization composed of employers, executives, and salesmen in the lumber and related industries, makes a stronger appeal to them than the labor union. They are not particularly interested in improving wages or working conditions, as they expect to rise out of rather than with their group. From the point of view of the employer this is the most desirable class of workers, but, unfortunately for him, there are not many of them.

THE TYPICAL LUMBERJACK.

The third type group includes the majority of the workers in this, as in nearly every other, industry, and is made up of those who look upon their jobs as the permanent source of the income necessary for a normal life as members of society. Most of them have, or expect to have, families and homes of their own. Home ownership is an ideal, although the insecurity of the job often makes it unattainable. The group is large and complex, and the members differ widely in skill, strength, and intelligence, ranging all the way from the filer or logging engineer to the pick-and-shovel man. A man of this type may enjoy his work to such an extent that a doubling of wages would not lure him away from it, or he may hate it so that only the fear of want for wife and children can hold him to it. But the important thing is that he looks upon work in the lumber region as permanent and thinks of any other general type of work as either unattainable or undesirable.

Most of the skilled and semiskilled men in the lumber industry, such as sawyers, filers, tallymen, graders, and most of the loggers, would find their skill largely useless if they left the lumber industry. As a result we find that these men are usually much interested in the industry and the conditions of work therein and are willing to make many sacrifices to improve conditions. Many of them take a pride and joy in their work which to them has a real money value, and often declare that "you can't hire me to work at anything else." This is probably true, if taken as they mean it, that no other industry can afford to offer them a wage high enough to entice them away from the lumber industry. They feel that the industry is "their industry," their lives are bound up with it, and they, more than any others, deserve the title of "lumberjack."

In this third type group there are other workers, skilled and unskilled, who do not have this job pride. Many of them have worked in other industries and could readily shift back again. They usually take about as much interest in their work as a boy does in school when the fish are biting or a circus is in town. They are industrious and reliable usually in proportion to their standard of living or the size of their families. To them work is a necessary evil, with pay days and Sundays as the only bright spots on the horizon. They have no love for their jobs or for the industry, largely because

they are usually suspicious of the employer and believe that there is a definite antagonism of interests between employer and employee. While these men are usually very sympathetic toward the I. W. W. analysis of industrial conditions, they are not willing to go the whole way of the proletarian revolution.

THE MIGRATORY WORKER.

The fourth type, the typical migratory worker, is an easy evolution from the lower levels of the third group. The man without interest in his work is usually a poor workman, and so is the first to be let go in times of slack work. Unemployment forces him to move, and the first move makes the second easier and more necessary, the steps downward becoming more rapid and certain. Soon the worker has lost all connection with a settled life, his family is abandoned or disintegrated, and he becomes entirely foot-loose. Of a group of migratory workers studied in California in 1913–14, only 24 per cent had ever married, and of these nearly one-third had abandoned their wives, while only 14 per cent of the entire group admitted that there was anyone dependent upon them.[7] The report did not indicate whether there was any connection between the relation to dependents and the length of time these individuals had been migratories, but it is probable that those who still had dependents had not been wandering very long.

Not all migratory workers, however, are industrial misfits or failures. Undoubtedly there is a nomadic instinct of some sort in the human make-up which is more highly developed in some men than in others. Certainly nomadic man, to quote Professor Tugwell, "neglected to shed his nature with his habits" when he abandoned nomadic life,[8] and throughout the whole history of civilized society there have been individuals and races who could not be satisfied with a settled life. This wanderlust may not always show itself in the same way, but it is somehow associated with the artist, the pioneer, and the genius.

Every new country draws in large measure on men of this restless type for its early settlers. Not only do they live in the realm of the imagination, but they also possess the courage to cut loose from the old moorings and follow the lure of the magic vision. The Oregon country appealed to men and women of this type throughout the country and they flocked to the new land, chiefly from the frontiers. A writer in 1884 thus referred to the laborers on the West Coast:

> The people of the Pacific coast are strangely nomadic—a fact especially true of the unmarried. You can hardly enter into conversation with a working man who can not give you some account of almost any settled district west of the Rocky Mountains, often including the Sandwich Islands, Australia, and the Chinese ports. It is one of the drawbacks to large industrial enterprise that steady labor can not be counted upon. Partly because of their feeling of independence, partly the vagabondish spirit engendered by their long and gradually progressive journey hither from the Atlantic States, men are likely to forsake their employer at very short notice and go somewhere else with ill-defined purpose.[9]

An analysis of the conditions of modern industrial society would lead one to expect that the migratory group would include men of

[7] Quoted in The Casual Laborer, by Carleton H. Parker, New York, 1920, pp. 70-72.
[8] Pacific Review, September, 1921. "The gipsy strain," by R. G. Tugwell.
[9] Harper's Magazine, May, 1884, p. 871. "From the Frazer to the Columbia," by E. Ingersoll.

nearly the whole range of human ability and intelligence, although, of course, not the whole range of accomplishment. Students of social psychology have pointed out that our modern civilization is not in harmony with the human instinctive endowment, and that modern man has been unable to adjust himself to the rapidly changing social conditions, with the result that stresses and strains have developed which have made it difficult for the individual to adjust himself to the demands of social life. In particular this is true of the factory system as it has developed during the past century and a half. The sense of oppression felt by the rural British workers when they went into the factories at the close of the eighteenth century was the cause of a great deal of social maladjustment,[10] while the failure of many people to adjust themselves to modern civilization has resulted in various kinds of nervous disorders, a decrease in the birth rate, and in open rebellion.[11]

Considerations such as these would lead us to expect to find among the migratory groups many who lacked the mental ability to make the adjustments necessary for life in our complex social environment. We would expect to find those who had failed to fit into their niche in the industrial structure and had given up striving. There would be those of sensitive nervous temperament who had been repelled by the mechanical routine of orderly society and those of esthetic leanings who felt that there was no place in our social order for the higher values of life. There would be the rebels who could not endure the "tyranny of the machine" or who had revolted from the "maladjustments and injustices of a capitalistic society." These groups differ widely in mental alertness and ability, from great genius to those low levels where men can exist only by virtue of special care.

INTELLIGENCE STUDY OF MIGRATORY WORKERS.

A careful study of the intelligence of the migratory workers was made during the winter of 1915–16 by H. E. Knollin[12] and it confirms this a priori analysis He tested, by means of the Stanford revision of the Binet-Simon intelligence scale, 183 of the lower grade of migratories at Palo Alto, Calif. The tests were applied to men who were staying at a hostel maintained by the city of Palo Alto, to which any man was admitted for two days on condition that he would do a liberal amount of work on the woodpile. This disagreeable feature was counterbalanced by the opportunity to rid one's self of vermin, the possession of which destroys the hobo's self-respect. The subject was given 25 cents and a liberal supply of tobacco as payment for submitting to the tests. In Table 14 some of the results of this test are summarized and compared with the results of a similar test applied by Mr. Knollin to all of the prisoners admitted to the California State penitentiary at San Quentin between September 25 and November 20, 1916, 155 in number, and of a test by C. W. Waugh of a group of 156 street-car platform men in the San Francisco Bay region.

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[10] Hammond, J. L. and B.: The Town Laborer, pp. 17–36.
[11] The Instinct of Workmanship, by T. Veblen, pp. 318–320; The Great Society, by Graham Wallas, p. 66.
[12] Knollin, H. E.: The relation of intelligence to unemployment and crime, pp. 7, 19, 51–56, 84. Stanford University, Calif., M. A. Thesis, 1917.

TABLE 14.—RESULTS OF INTELLIGENCE RATINGS OF THREE GROUPS OF ADULTS TESTED BY THE STANFORD REVISION OF THE BINET-SIMON SCALE.

Group.	Mental age (years).			Per cent having mental age under—	
	Lowest.	Median.	Highest.	12 years.	11 years.
Migratories	7.5	14	19	19	10
Prisoners	7	13.67	18	27	15.5
Street-car men	10	14	19	11.5	3

Those showing a mental age of less than 12 years were classed as morons, while those under 11 years were considered feeble-minded. It will be seen that while the median of all three groups was about the same, the range was greatest among the migratories, and that the proportion of low mentality was much higher among that group than among the unskilled workers on the street cars. A group of business men who were tested showed a minimum mental age of about 13 years.

Not all of the men included in Mr. Knollin's study properly belong to the group which we are now considering. P. A. Speak, an expert on casual labor, who was with the United States Industrial Relations Commission, thus classifies migratory workers, all of whom he considers as unskilled: First, the seasonal worker who is employed most of the year, but at different jobs in different seasons; and, second, the casual worker. Casual workers are of three types—first, the true casual who works whenever possible and pays his own way; second, the city casual who maintains a definite dwelling, but does odd jobs; and, third, the hobo who prefers to work when convenient, but who has lost his self-respect and does not hesitate to beg and steal. There is another group of wanderers, the unemployables, who can not or will not work.[13] The fourth type, which we are now considering, combines many of the features of the seasonal and of the true casual worker. The men of this group are usually employed and always pay their own way, but they move often from job to job. There is a peculiar type of wandering logger, less often a wandering sawmill worker, who remains with the industry, but has no home or other definite social ties except the very precarious tie which draws him to the city at frequent intervals. After such a trip to town, which nearly always occurs on the Fourth of July and on Christmas, and probably at several other times during the year, the logger seldom returns to the camp from which he went to town. The range of his wanderings may be wide or narrow. Some of these men find the whole Pacific Northwest too small a field for the exercise of their wanderlust; others are content to go from job to job within a very small area. In general, the migratory logger does not circulate freely between the long-log and the short-log countries,[14] although he may drift all over either region. For most of them, however, a small field is usually the limit of their wanderings. A logger may have worked in every important camp on Puget Sound and Grays Harbor, but he

[13] Annals of the American Academy of Political and Social Science, January, 1917, pp. 72–78. "The psychology of floating workers," by P. A. Speak.

[14] The "long-log" country is the region of large timber west of the Cascades in Washington, Oregon, California, and British Columbia, where the practice is to cut the logs from 24 to 40 feet long or even longer. The "short-log" country lies eastward from the Cascades to the Atlantic, where timber is usually cut into 16-foot logs.

will seldom leave that region. Willapa Harbor has its own group of loggers who seldom stray beyond the camps tributary to that harbor, while the same is true of Coos Bay. Columbia River loggers seldom go away from that river and its lower tributaries, although they move all over that region.

This type of migratory logger is seldom a wholly unskilled worker; many of them possess a high degree of skill, and hook tenders, high climbers, loaders, engineers, filers—in fact nearly every type of logger except the wholly unskilled worker—are usually migratories. However, the higher their skill the less likely they are to leave the special district in which they move freely. The conditions under which these men live and work have predisposed them favorably toward the I. W. W. propaganda, and most of them are sympathetic to the I. W. W. philosophy, although by no means a majority of them regularly carry the red card.

THE HOBO.

The fifth and lowest type of worker, the hobo, has sunk down through the ranks of the true migratories. He is distinguished from the type just considered in that, while the latter works a considerable portion of the year but in different jobs, the hobo works only when he is compelled to by hunger. While the hobo would usually prefer to work rather than to beg or to steal, he does not long hesitate to do either when proper work is not available. Such a man is not permanent in any industry but drifts in and out of temporary jobs. He is in nearly every case an unskilled worker and does a large part of the unskilled work in the camps and those mills adjacent to fast freight lines. He is the most unreliable and unsatisfactory of workers, and it is usually to avoid dependence upon such men that south European and Asiatic laborers have been favorably received. Probably the majority of the migratories examined by Mr. Knollin were of this type.

It is the hobo workers who present the really dangerous element in the labor problem. They are foot-loose rebels who no longer recognize the ordinary conventions of modern society but challenge the whole industrial system of which the relation of employer and employee forms a part. That challenge may be but the dumb resentment of the failure and outcast against the man who has succeeded, or it may be the very much more dangerous challenge of the I. W. W., which has a very positive philosophy to take the place of laissez faire and respect for private property. With such a group there can be no common ground. The I. W. W. refuses to accept any of the assumptions of the employer or of society, and declares eternal and uncompromising war against the whole system in which the employer finds a place. It should be frankly recognized that the members of the I. W. W., and to a lesser degree all the migratories, stand on this platform:

> The working class and the employing class have nothing in common. * * * Between these two classes a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production, and abolish the wage system.[15]

[15] From the I. W. W. "Preamble," which is the real platform of the organization and printed on nearly every publication put out by it.

The relation between the migratory workers, particularly the hobo workers, and the I. W. W. is admirably expressed, from the I. W. W. viewpoint, in the following statement by an I. W. W. leader:

> The nomadic worker of the West embodies the very spirit of the I. W. W. His cheerful cynicism, his frank and outspoken contempt for most of the conventions of bourgeois society, including the more stringent conventions which masquerade under the name of morality, make him an admirable exemplar of the iconoclastic doctrine of revolutionary unionism. His anomalous position, half industrial slave, half vagabond adventurer, leaves him infinitely less servile than his fellow worker in the East. Unlike the factory slave of the Atlantic seaboard and the Central States he is most emphatically not "afraid of his job." His mobility is amazing. Buoyantly confident of his ability to "get by" somehow, he promptly shakes the dust of a locality from his feet whenever the board is bad, or the boss too exacting, or the work unduly tiresome, departing for the next job, even if it be 500 miles away. Cost of transportation does not daunt him. "Freight trains run every day" and his ingenuity is a match for the vigilance of trainmen and special police. No wife or family cumber him. The workman of the East, oppressed by the fear of want for wife and babies, dare not venture much. He has perforce the tameness of the domesticated animals. But the tang of the wild taints the free and foot-loose western nomad to the bone. Nowhere else can a section of the working class be found so admirably fitted to serve as the scouts and advance guards of the labor army. Rather they may become the guerrillas of the revolution—the francs-tireurs of the class struggle.[16]

[16] Solidarity, Nov. 21, 1914, p. 3.

CHAPTER VII.—LABOR UNIONS AFFILIATED WITH THE AMERICAN FEDERATION OF LABOR.

INTERNATIONAL SHINGLE WEAVERS' UNION OF AMERICA.

The first union activity among the workers in the lumber industry on the West Coast occurred among the workers in the shingle mills, commonly called the "shingle weavers," about 1890. The shingle weavers were never very numerous, the group in any mill being small. They were very mobile, the range of skill required was small, and most of the work could be done by any one of the group. In addition, the method of wage payment—by the piece—and the dependence of all the crew upon the pace set by the shingle sawyers, drew them together. The dangers of the occupation, particularly to the sawyers, made them daring. This group was much better fitted to take the lead in union activity than any other group in the industry.

About 1890 they formed the West Coast Shingle Weavers' Union, with locals in Ballard, Tacoma, Snohomish, Arlington, Sedro Woolley, and Chehalis. The union probably deserves much of the credit for the increase in wages which occurred about that time, when the rate for packing shingles went to 10 cents per thousand. In 1893 the union struck against a cut of 1 cent per thousand and lost. This strike and the panic which occurred while the men were out destroyed the union. During the next few years wages went down until the men were packing for 3 cents per thousand.[1] Attempts seem to have been made during the two or three years preceding 1901 to reorganize the union, but little seems to have been accomplished.[2] Taking advantage of the good shingle market in 1901, the weavers carried on a vigorous agitation for better wages and conditions. This resulted in a general increase in wages and the formation of shingle weavers' locals in many of the shingle centers of west Washington. In nearly every case the union was the result of a successful strike for better wages. These locals were chartered directly by the American Federation of Labor, but were loosely associated together through a "grand council." [1]

In January, 1903, the various shingle weavers' locals held a convention at Everett, at which they united to form the International Shingle Weavers' Union of America. Among the locals represented at this convention were Aberdeen, Arlington, Ballard, Castle Rock, Edmonds, Elma, Everett, Fairhaven (now Bellingham), Hartford, Marysville, Olympia, and Sedro Woolley, all in west Washington, and Marinette, Wis.[1] A comparison of available data from various sources leads to the conclusion that there were 24 locals in existence at that time, although they were probably not all represented at the convention. Among the nonrepresented locals were probably locals at Seattle, Snohomish, Tacoma, Blaine, and Hoquiam.[5] The mem-

[1] Shingle Weaver, Feb 8, 1913, p. 1. "History of the shingle weavers' union."
[2] Timberman, June, 1900, p. 17.
[5] Washington State Bureau of Labor, biennial reports 1903–1904, p. 100 et seq.; 1907–1908, p. 100; 1909–1910, pp. 47–82; Shingle Weaver, Jan. 27, 1912, p. 7.

bership of the international union during the first year reached 1,300, a very creditable showing considering the small number of men employed in the industry.[6] The international union soon began the publication of a monthly journal, the Shingle Weaver, which, on April 1, 1911, became a four-page weekly.

During the first few years of its existence the International Shingle Weavers' Union was involved in many strikes, most of them of minor importance. Among the more important were the Everett trouble in 1904, the Ballard and general strikes of 1906, the Grays Harbor strike in 1911–12, and the second Ballard strike in 1913. The trouble in Everett in 1904 began early in the spring when the shingle mills attempted to secure a general suspension of operations to strengthen the market and some of the mills refused to close. The mills which closed demanded that the union call its members out of the mills which continued to operate and so make the shutdown general. This the union refused to do. On April 26, 1904, the State commissioner of labor secured a settlement whereby the union and the employers entered into an agreement with regard to wages and a further agreement that when the price of shingles fell below an agreed minimum the mills were all to shut down and the union would call its members out of any plant which refused to close.[7] About two months after this agreement was reached, on June 27, 1904, the Everett mills locked out their shingle weavers for a cut of 20 per cent below the agreed scale. All mills were shut down for about five weeks, but about August 1 the old wage was restored and the men returned to work.[8]

The general strike of 1906 began at Ballard on April 1 when the union there went on strike ostensibly to secure the union scale which was being paid elsewhere. As this meant only a nominal increase, it was generally recognized that the strike was for recognition of the union and it was fought out on this ground. The owners refused to negotiate with the union in any way. The international union supported the strikers, while operators in other parts of the State assisted the mills, and both sides prepared to make the issue of recognition state-wide. On July 17 the international called out all of its members on the West Coast, tying up about 60 per cent of the shingle production. After about two weeks, on July 30, a special convention of the union in Tacoma called the strike off and the men went back to work wherever they could secure jobs, the union being practically destroyed.[9]

The next important strike occurred on Grays Harbor in 1911–12. The union had undertaken an aggressive organization campaign there, but on October 10, 1911, before they had quite completed it, two plants discharged their union employees, whereupon the union promptly called a strike at both plants. Before long two other plants joined in the lockout. The trouble caused considerable bitterness, particularly in Hoquiam, where some disorder occurred, and in spite of efforts by the Hoquiam Chamber of Commerce to secure a settlement, the strike dragged along until it merged into the I. W.

[6] American Federation of Labor Proceedings of thirty-first annual convention, 1911, p. 87
[7] Washington, State Bureau of Labor. Biennial report, 1903-1904, p. 27 et seq.
[8] Idem, p. 63; Pacific Lumber Trade Journal, July, 1904, p. 30, August, 1904, p. 18.
[9] Washington State Bureau of Labor. Biennial report, 1905-1906, pp. 194-196; Pacific Lumber Trade Journal, June, 1906, p. 9; July, 1906, pp. 9, 33; August, 1906, p. 10; September, 1906, p. 9; Shingle Weaver, Feb. 8, 1913, p. 1.

W. strike on March 14. 1912. When the I. W. W. trouble was settled most of the original demands of the shingle weavers were granted.[10]

The Ballard strike in 1913 began on April 7, when the union went on strike for the union scale, an advance in wages of about 10 per cent. About 300 men went out. The union stood firm, but strike breakers were brought in, causing conditions in the mills to become bad. On July 14 the union called the strike off and the men went back to work. It explained its action by stating that one mill had decided to yield and to start work on July 14 with a union crew, but that the other operators combined and bought the mill to prevent this defection in their ranks, which convinced the union that the operators were receiving outside assistance. It was therefore considered wise to call off the strike and preserve the union.[11]

Mention must be made here of the frequent attempts made to withdraw the Shingle Weavers' Union from the American Federation of Labor and to affiliate it with the I. W. W. The latter charged that the officials of the Shingle Weavers' Union prevented the members of the union from making such a change when the majority favored it. At the 1912 convention of the Shingle Weavers' Union a resolution favoring such a change of affiliation was introduced, but it was unanimously rejected.[12]

INTERNATIONAL BROTHERHOOD OF WOODSMEN AND SAWMILL WORKERS.

Among the many attempts made before 1913 to organize the sawmill and logging-camp workers on the West Coast there are few which deserve more than passing notice. A number of locals were organized among these workers before 1905, but they do not seem to have had a very vigorous or long life.[13] In 1905 the American Federation of Labor granted a charter to the International Brotherhood of Woodsmen and Sawmill Workers. The peak strength of this union, less than 1,250 members, was reached in 1906. By 1911 the membership had fallen to about half that number, and the union was suspended from the Federation of Labor for failure to pay the per capita tax.[14] The international offices were at Lothrop, Mont., and the only local on the West Coast of which a record is available was local No. 24 at Everett, Wash.[15] About 1906 an organization called the Royal Loggers was formed among the loggers on Puget Sound. It seems to have made considerable headway, as 3,000 loggers attended its picnic at Seattle, July 4, 1906. It was disrupted after the promoter absconded with its funds.[16]

INTERNATIONAL UNION OF TIMBER WORKERS.

Following the suspension of the International Brotherhood of Woodsmen and Sawmill Workers by the American Federation of Labor in 1911, the tenth annual convention of the Shingle Weavers'

[10] Aberdeen World, Oct. 25, 1911, p. 4; Oct. 27, pp. 1, 4; Shingle Weaver, Oct. 28, 1911, p. 1; Nov. 18, p. 1; Dec. 16, p. 1; Jan. 27, 1912, p. 2 et seq.; Mar. 9, 1912, p. 1. See also account of the I. W. W. strike, pp. 65 to 66, post.

[11] Timber Worker, Apr. 12, 1913, p. 1; May 24, 1913, p. 1; Jan. 31, 1914, p. 6.

[12] Industrial Worker, Jan. 23, 1913, p. 1; The Everett Massacre, by Walker C. Smith, Chicago, 1917, p. 29; Shingle Weaver, Feb. 1, 1913, p. 10.

[13] Timberman, June, 1901, p. 5; July, 1903, p. 16.

[14] American Federation of Labor. Proceedings of the fortieth annual convention, 1920, p. 33 et seq.; 1911, p. 87.

[15] Washington State Bureau of Labor. Biennial report. 1909–1910, pp. 47–82.

[16] Pacific Lumber Trade Journal, July, 1906, p. 59; Industrial Worker, Spokane, Nov. 23, 1911, p. 4.

Union, meeting at Sedro Woolley, Wash., in January, 1912, voted to instruct the officers to attempt to secure from the American Federation of Labor an extension of jurisdiction to cover the entire lumber industry.[17] This extension was granted in November, 1912, and during December the extension of jurisdiction was indorsed by a referendum vote of the Shingle Weavers' Union. The Portland convention in January, 1913, made the necessary changes in the constitution to provide for the enlarged scope of its activities. The name of the union was changed to the International Union of Shingle Weavers, Sawmill Workers, and Woodsmen, and the name of its journal to the Timber Worker.[18] These changes became effective on March 1, 1913. A year later the union voted to change its name to the International Union of Timber Workers.[19]

The shingle weavers had often agitated for the eight-hour day, and at the Hoquiam convention in January, 1906, they voted to strike for it on June 1, 1907,[20] but the strike of 1906 left them unable to press the demand, and eight years elapsed before they were again in a position to do so. At the Aberdeen convention in January, 1914, a resolution was unanimously adopted instructing the executive board to attempt to secure the eight-hour day in the lumber industry, on the basis of the same hourly pay as for the ten-hour day, except that the minimum daily wage should be $2.25. Time and a half was demanded for overtime. A strike was ordered for May 1 in case the demands were not granted voluntarily.[21] The matter of a strike assessment was left to the executive board, which levied an assessment of one day's pay per month for March and April, but only $4,354 of this was ever paid in.[22] The convention voted not to submit the question of a strike to a referendum, as it was thought most employers would be willing to grant the demands promptly, and that the strike would be necessary in but a few places. Also the result of a referendum could not be known much before April 1, and this would seriously cripple the strike preparations.[23]

The union soon found that the employers were by no means as ready to grant the eight-hour day as it had expected. Instead, they launched an aggressive attack on the union. On February 9, 1914, an Everett firm discharged 23 union men and precipitated a strike. The other Everett operators threatened a lockout if the strike was not settled by the early part of March. Seven other mills closed for a few days, then opened on the open-shop basis, with the union not recognized in any way.[24] As a part of the same movement a plant in Raymond locked out all union men on February 18, and 14 other Raymond mills soon joined in the lockout. After a few days the men came back on the open-shop basis with the union not recognized.[25]

[17] Shingle Weaver, Jan. 27, 1912, p. 10.
[18] Idem, Feb. 1, 1913, p. 2; Feb. 22, 1913, p. 2.
[19] Timber Worker, Mar. 21, 1914, p. 3.
[20] Pacific Lumber Trade Journal, February, 1906, p. 34.
[21] Timber Worker, Jan. 31, 1914, p. 12. Proceedings of twelfth annual convention, resolution No. 104.
[22] Timber Worker, Jan. 31, 1914, p. 16; Feb. 1, 1915, pp. 2 and 7.
[23] Idem, Jan. 31, 1914, pp. 12, 18, 19.
[24] Washington State Bureau of Labor, Biennial report, 1913-1914, pp. 120-122; West Coast Lumberman, Mar. 1, 1914, p. 34; Timber Worker, Feb. 21, 1914, p. 1.
[25] Washington State Bureau of Labor, Biennial report, 1913-1914, pp. 120-122; West Coast Lumberman, Mar. 15, 1914, p. 39.

At the same time there was a growing feeling among the members of the union that political action was more desirable than direct action, and nine locals demanded a referendum on the strike call. Before another local could take similar action, thus making it mandatory on the executive board to hold the referendum, the board called a special convention at Seattle for February 26–27, 1914. At this convention it was resolved:

> That all employers, as far as they can be reached, in the lumber industry, be communicated with and a full statement made setting forth our position on the 8-hour question for the 1st of May. In case a sufficient number return favorable replies another convention may be called and further arrangement made for the inauguration of the 8-hour day on May 1. On the other hand, in the absence of a sufficient number of favorable replies from employers the international union shall advise all local unions to suspend all preparations for the 1st of May and devote all possible energy to the development of sentiment in favor of the 8-hour initiative measure to be voted on at the forthcoming election in November.[26]

The defeat of the eight-hour measure in November was attributed by the vice president of the union partly to the action of the employers in shutting down their mills and camps just before election, so that the employees would lose their votes.[27]

The action of the union in calling a strike and then deciding to trust to political rather than industrial action marked the turning point in its history. The membership immediately began to fall off. This is shown in the following statement which gives the membership of the Timber Workers' Union locals affiliated with the Washington State Federation of Labor from 1914 to 1916, by quarters:[28]

		Affiliated locals.	Members.
1914:	First quarter	22	2,293
	Second quarter	20	1,768
	Third quarter	20	1,523
	Fourth quarter	18	1,158
1915:	First quarter	11	617
	Second quarter	5	118
	Third quarter	4	116
	Fourth quarter	4	71
1916:	First quarter	2	23

Not all locals were affiliated with the State federation, and it is probable that locals continued to have at least a nominal existence after they withdrew from the State federation. Still these reports reflect something of the drop in membership suffered by the Timber Workers' Union during this period. This decrease in membership is also shown in Table 15, which shows the annual membership of the union from the time of its organization in 1903 until the reorganization in March, 1918. This table is compiled from the number of votes allowed the union in the American Federation of Labor conventions, where the constituent unions were granted 1 vote for each 100 members or major fraction thereof.

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[26] Interview with Harry Call, then a vice-president of the union, June, 1922; Timber Worker, Feb. 1, 1915, p. 2; Mar. 7, 1914, p. 1; Washington State Federation of Labor, Proceedings of fourteenth annual convention, 1915, p. 10 et seq.

[27] Timber Worker, Feb. 1, 1915, p. 5.

[28] Washington State Federation of Labor, Proceedings of fourteenth annual convention, 1915, pp. 29–34; fifteenth annual convention, 1916, pp. 33–39; sixteenth annual convention, 1917, pp. 31–36.

TABLE 15.—MEMBERSHIP[1] OF THE TIMBER WORKERS' UNION FROM 1903 TO 1918, BY YEARS.[2]

Year.	Members.	Name of union.
1903	1,300	International Shingle Weavers' Union of America.
1904	1,400	Do.
1905	1,600	Do.
1906	1,700	Do.
1907	1,800	Do.
1908	1,700	Do.
1909	1,800	Do.
1910	1,800	Do.
1911	1,500	Do.
1912	1,500	Do.
1913	3,100	International Union of Shingle Weavers, Saw Mill Workers, and Woodsmen.
1914	2,500	International Union of Timber Workers.
1915	700	Do.
1916	400	International Shingle Weavers' Union of America.
1917	500	Do.
1918	[3] 206	Do.

[1] To the nearest 100 members.
[2] American Federation of Labor. Proceedings of the thirty-first annual convention, 1911, p. 87; proceedings of thirty-eighth annual convention, 1918, p. 22.
[3] The membership reported for 1918 was the actual membership at the time of the reorganization on March 1, 1918.

The employers took advantage of the weakened condition of the union and during 1915 launched many attacks upon it. On February 1, 1915, the union was engaged in 15 strikes and lockouts in as many towns in Washington [29] and the number was rapidly increasing. On February 19 the Everett mills posted notice of a cut of 20 per cent in wages, effective March 1. The union voted to strike and went out on February 22. The strike was lost, and on May 12 it was called off on the promise of the operators to raise wages again when the market improved.[30] During the year the union fought 55 lockouts, involving the entire membership and lost in nearly every case.[31] The union was almost completely destroyed.

REORGANIZATION OF INTERNATIONAL SHINGLE WEAVERS' UNION OF AMERICA.

As a result of the disastrous strikes in 1915 and the complete failure of the Timber Workers' Union to organize the lumber industry, the American Federation of Labor, in the fall of 1915, revoked the jurisdiction of the union over the sawmill and camp workers. This left the union with jurisdiction over only the shingle weavers, just as it was before 1913.[32] Early in 1916 the shingle weavers began to revive the union, and by April 1, 1916, there were 24 locals functioning, although only 14 were represented at the convention in Seattle on April 3. At this time the union was reorganized with the name it held before 1913, the International Shingle Weavers' Union of America. The control of strikes was put in the hands of the executive board [33] and the Seattle Union Record was made the official organ of the union. The last page of the Record was turned over

[29] Timber Worker, Feb. 1, 1915, p. 12.
[30] Washington State Bureau of Labor, Biennial report, 1915–1916, pp. 237–239; Seattle Union Record, Mar. 13, 1915, p. 3.
[31] American Federation of Labor. Proceedings of thirty-fifth annual convention, 1915, p. 38.
[32] Shingle Weaver, Apr. 4, 1916; Seattle Union Record, Feb. 12, 1916, p. 4; Interview with Harry Call, June, 1922.
[33] E. P. Marsh, vice-president of the Shingle Weavers' Union and president of the Washington State Federation of Labor, reported to the Federation that the chief cause of the disaster to the Timber Workers' Union was the strong element in the union which objected to signing contracts with the employers.—Washington State Federation of Labor, Proceedings of fifteenth annual convention, 1916, pp. 16–18.

to the union and was called the "Shingle Weaver," and all references to the Shingle Weaver after April 1, 1916, are to this sheet.[34] The locals affiliated at this time were Aberdeen, Anacortes, Bellingham, Edmonds, Everett, Granite Falls, Inglewood, Kapowsin, Kelso, Marysville, Monroe, Olympia, Port Angeles, Raymond, Seattle, Sedro Woolley and Snohomish in Washington; Eureka, Calif.; Mellen and Soperton, Wis.; and Manistee, Menominee, Munsing, and Sault Ste. Marie, Mich.[35]

The first business before the reorganized union was to secure the restoration of the wage scale, which had been cut the year before. Shingle prices had advanced in the spring of 1916, and the union demanded the fulfillment of the promise made it the year before that the scale would be restored when shingles recovered their 1914 price. Many of the operators denied ever having made such a promise and refused to raise wages. The union called a strike for May 1, 1916, in all mills which did not grant the increase demanded. Most of the mills readily granted the demands, and it was only in Everett and Anacortes that the strike assumed serious proportions. At Everett, particularly, there was a great deal of bitterness which resulted in considerable violence. Most of the 470 men who struck there went into other jobs, but enough remained to maintain a picket line. On November 8 the strike was called off because of I. W. W. trouble there. The employers failed to meet the union's idea of fairness in the situation, and the strike was resumed on December 11. However, during the winter and early spring the strike gradually died out there and at Anacortes.[36]

At the annual convention held at Everett on May 17 preparations were begun for a strike in the summer of 1917. On June 30 there were still 24 locals, but Inglewood and Monroe, Wash., and Munsing, Mich., locals had lapsed, while charters had been granted at Vancouver, British Columbia; Nahma, Mich., and Seattle.[37] It was with this strength that the shingle weavers entered the great strike of July 16, 1917.[38]

NEW INTERNATIONAL UNION OF TIMBER WORKERS.

After the American Federation of Labor revoked the jurisdiction of the International Timber Workers' Union over the sawmill and camp workers, these workers began to form locals. Finally, in 1916, these locals merged into a new International Union of Timber Workers, which did not include the shingle weavers. In January, 1917, the union held a convention at Aberdeen.[39] The union was indorsed by the State federation in the spring of 1917 and at about the same time received a charter from the American Federation of Labor.

[34] Seattle Union Record, Mar. 11, 1916, p. 6; Apr. 8, p. 1; Shingle Weaver, Apr. 15, 1916.
[35] Shingle Weaver, Apr. 22, 1916.
[36] Washington State Bureau of Labor, Biennial report, 1915–1916, pp. 239–242; Washington State Federation of Labor, Proceedings of sixteenth annual convention, 1917, p. 10 et seq.; Shingle Weaver, May 20, Nov. 11, Dec. 2, and Dec. 16, 1916.
[37] Shingle Weaver, Mar. 17, Apr. 21, and June 30, 1917.
[38] See Ch. IX.
[39] Washington State Federation of Labor, Proceedings of sixteenth annual convention, 1917, p. 136; American Federation of Labor, Proceedings of fortieth annual convention, 1920, p. 35; Shingle Weaver, Jan. 20, 27, 1917

CHAPTER VIII.—INDUSTRIAL WORKERS OF THE WORLD.

PRINCIPLES AND ATTITUDE OF THE I. W. W.

To understand the nature and significance of the I. W. W. in the West Coast lumber industry it is necessary to recall the analysis of labor types made in Chapter VI. The members of the I. W. W. have been recruited almost entirely from the migratory and hobo groups, with a sprinkling from the lower levels of the settled workers. The number of this latter type depends upon the general industrial and social conditions. Such workers feel more easily and naturally than do the more permanent portions of the laboring classes the appeal of the closing words of the communist manifesto: "The proletarians have nothing to lose but their chains. They have a world to win. Workers of the world, unite!" It is easy for the I. W. W., a frankly revolutionary organization which takes these words wholeheartedly, to make headway among men of this type; in fact, the migratory lumber worker has had no small place in shaping the ideals and tactics of the I. W. W.

It is perhaps possible to express the essential principles of the I. W. W. in five statements: (1) The interests of the employer and the employees are absolutely contradictory; they have nothing in common; (2) the wages system must give place to an industrial society managed by the workers themselves; (3) labor organizations must be based on industrial rather than craft lines; (4) the aims of labor must be secured by industrial rather than political action; (5) a new moral ideal and code must be developed which shall recognize the rights of human life and happiness as taking precedence over the rights of property. Most of these ideas are clearly expressed in the "Preamble," the real platform of the I. W. W.,[1] while the other ideas are held by the leaders to be implicit in that statement. The assumption underlying all of these ideas is the belief in the class war. The relation between the lumber workers and these principles is set forth in the following paragraphs.

Among the important points of difference between employers and employees we may note the questions of wages, hours, working and living conditions, and the control of industry. It is these which attract the notice of the migratory worker, and he is not apt to notice those points where their interests are harmonious—in the general prosperity of the industry and the community and the general well-being of all parties to the industrial arrangement. However, he comes in contact with a great many employers who also fail to see these points of mutual interest. The wandering worker is, by virtue of that fact, not normal, and he fails to get the normal and sensible point of view. He is very likely to personalize all the evils of the present maladjustment of industrial conditions in the employer, whom he believes to be in control of those conditions, and to believe the guilt personal when it is properly institutional.

With this diagnosis of the situation—that the whole trouble comes from the selfishness of the employer—these workers desire to elimi-

[1] The I. W. W. "Preamble" is printed on nearly every publication put out by the organization.

nate the source of the trouble, the employer himself. While they are doing this they want to overthrow the whole system which permits an employer to secure control over the lives of the workers. Because the employer has abused his power he should be shorn of it, they claim. There is a real desire on the part of the wandering worker for a measure of authority. One of the elements of his dissatisfaction is the thwarting of his instinct for mastery, and he dreams of the time when he will be able to control industry for his own good. The syndicalist ideal of control of industry by syndicates or trade-unions offers just the means needed to satisfy this longing. Not merely does it furnish release from bad conditions, but it also gives a new system which has elements of real pyschological worth.

The lumber industry, particularly the logging branch of it, is not readily organizable along craft lines. The logging camp employs a large number of unskilled or semiskilled workers and only a few highly skilled men of many different crafts. The same thing is true to a somewhat lesser degree of the sawmill. There are engineers, machinists, carpenters, blacksmiths, and many other crafts peculiar to the lumber industry, but usually there are not more than two or three men of any one craft in a given camp or plant. In the camps most of the men live together in the bunk house, and when not at work are associated very closely together. In the mills the contact is not so close, but acquaintance among the workers is quite general. This close affiliation of all workers, whether or not of any craft, as well as the small number of any craft in a locality, has hindered the formation of the craft type of union. In most of the mills the skilled workers have risen from the ranks of the unskilled and still feel a strong community of interest with the poorer paid men. While in a few mills there has been an attempt made by the management to break down this solidarity by paying the skilled workers unusually high wages and the unskilled men low wages, in general the feeling of solidarity is strong, thus making for the industrial rather than the craft type of organization.

During the first four conventions of the I. W. W. there was a bitter fight between those who believed in the use of political action by labor and those who rejected it entirely. The latter finally won in the fourth convention in 1908, largely by the aid of the "overall brigade" from the Pacific coast.[2] It is easy to see why the migratory worker has no use for political action. In the first place he seldom remains long enough in any locality to have a vote. A survey of three logging camps in one precinct on Willapa Harbor in 1910, with crews aggregating over 300 men, showed that while a large majority of the men were citizens, less than half had been in the precinct the 30 days necessary to vote, although the camps had been in continuous operation for months.[3] Again, the migratory worker often comes into conflict with the peace officers in the various communities he visits, and has come to feel that the police, sheriffs, and town marshals do not respect any of his rights and that there is a different law for him than for the employer. Such instances as the Bisbee "deportation" in 1917 and the numerous occurrences of a similar nature but on a smaller scale have left the I. W. W. and the migra-

[2] The delegates from Portland, Tacoma, Seattle, and Spokane, who "beat" their way from the coast to Chicago, largely dominated the convention. See Industrial Union Bulletin, September and October, 1908.

[3] Survey made by the writer in August, 1910.

tories in general with the opinion that "There is no equality before the law, no justice in the courts."[4] An editorial in Solidarity some years earlier expressed the same conviction thus: "The I. W. W. has thoroughly tested the law in this instance [the Aberdeen free speech fight of 1911–12], and has found it just what we understand it to be—a mask to hide the mailed fist of the ruling classes."[5]

The I. W. W. thinks of morality as simply the reflection of the ideas of the dominant economic class. As such, morality has no more validity than the title of that class, the employers, to the control of economic life. Accordingly its challenge to that control is a challenge to common moral ideas, which it hopes to displace by a code more in harmony with what it considers the interests of the workers. A single quotation will show its position:

> The I. W. W. does believe in "right" and "wrong." But we understand that these terms are relative, depending in their ethical significance upon the standpoint from which they are considered. Our ethical code is interpreted solely from the standpoint of the working class and its interests. * * * We are indeed not concerned with what the master considers "right" or "wrong." * * * We want the earth and * * * anything which tends to promote that revolutionary tendency is right.[6]

ORGANIZATION ON THE WEST COAST.

Very shortly after its organization in June and July, 1905, the I. W. W. began its propaganda on the West Coast and soon had a number of flourishing locals. The Seattle local had several branches with a combined membership of 800 before the organization was a year old.[7] By March, 1907, there were locals at Portland, Tacoma, Aberdeen, Hoquiam, Ballard, North Bend, Astoria, and Vancouver, Wash.[8]

The I. W. W. first attracted public attention on the West Coast during the sawmill strike in Portland in March, 1907. The trouble began at a plant in North Portland when 28 chute men struck on March 1 against an increase of hours to 11 per day and for wages of $3 per day, an increase of 50 cents per day.[9] By Monday, March 4, the strike had spread to another plant, and both plants were badly crippled. The I. W. W. immediately stepped in, and 300 men joined the I. W. W. Local No. 319. The following day the second mill was completely closed, and the strike had spread to two other plants. In all about 600 men were out. The mills began importing strike breakers from Puget Sound, paying $3.75 per day, but most of these deserted when they discovered the conditions in Portland. By Thursday 1,100 men were out, and that night the I. W. W., which now had 1,400 members, held a mass meeting at which it formulated its demands—a 9-hour day, with a minimum wage of $2.50 per day. The I. W. W. locals at Aberdeen, Hoquiam, and Bridal Veil sent financial assistance and the Portland Central Labor Council voted its indorsement. By the end of the week only one of Portland's 12 mills was running. There were about 1,850 men on strike and 1,847 members in the I. W. W. Early the next week it began to look as though the shortage of lumber would throw out of work 8,000 building laborers in Portland, while lack of market for logs would close down the Columbia River camps, throwing

[4] Solidarity, July 31, 1915, p. 6.
[5] Idem, Dec. 16, 1912, p. 2.
[6] Idem, Jan. 4, 1913, p. 2.
[7] Solidarity, Sept. 18, 1911, p. 2.
[8] Industrial Union Bulletin, Aug. 24, 1907, p. 3 et seq.
[9] The Journal, Portland, Oreg., Mar. 2, p. 1.

another thousand men out of work. The State labor commissioner offered his services as mediator, which offer was accepted by the I. W. W. but rejected by the employers. The I. W. W. sent a number of its leading organizers into Portland at this time, and the Western Federation of Miners, an affiliated union, sent $20,000 for strike funds. About March 15 the Central Labor Council withdrew its indorsement of the strike, denounced the I. W. W., and branded anyone who aided either the I. W. W. or the strike as a traitor to labor. After March 19 the mills secured crews, and by March 27 all mills were running quietly again. The I. W. W. claimed that the strike was broken by the scabbing of the members of the American Federation of Labor.[10] One of its organizers reported that the strikers readily found work elsewhere, but that the serious crippling of the mills led to an increase of wages and an improvement of conditions.[11]

In common with all other interests on the West Coast the I. W. W. suffered during the depression of 1907–8, but a year later had recovered sufficient strength to begin the publication, on March 18, 1909,[12] of a weekly paper, the Industrial Worker.

During 1910 and 1911 agitation and organization went on with great vigor, and by the end of 1911 there were quite a number of I. W. W. locals on the West Coast. Of the strictly lumber worker locals, Seattle Local No. 432, which had been organized on March 1, 1908, with 68 charter members, was the largest. In the spring of 1911 it started a move for the organization of the lumber workers in the region.[13] Locals were formed at Snohomish, Aberdeen, Raymond, and Marshfield before the end of 1911.[14] On February 12, 1912, delegates from these and other locals of lumber workers met at Seattle and organized the National Industrial Union of Forest and Lumber Workers.[15]

STRIKES.

The most important lumber strike with which the I. W. W. was connected before 1917 began at Hoquiam, Wash., on March 14, 1912, when 25 members of the crew of a sawmill walked out and closed the mill. No demands were made at that time, although it was generally understood that the strike was for better wages. The mill was paying $2 for a 10-hour day. The strike spread at once to another plant which was paying $1.80, but not to one which was paying $2.25. That day 250 men joined the I. W. W. The following day the first mill resumed but was shut down again a day later. Two days later 60 more men left the second mill, which closed, while another mill raised wages to $2.25, thus escaping trouble. By March 19 there were 300 men out at the two struck mills in Hoquiam and the strike spread to Aberdeen (the two are really but one city), where two mills were affected. By March 22 six mills in Aberdeen were closed, in addition to three mills which were closed when the trouble began. One of them resumed the next day.[16]

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[10] The Journal, Portland, Oreg., Mar. 4, 1907, p. 1; Mar. 5, 1907, p. 1; Mar. 6, 1907, p. 1 et seq.; Mar. 7, 1907, p. 1; Mar. 8, 1907, pp. 1, 3; Mar. 9, 1907, p. 1; Mar. 11, 1907, p. 1; Mar. 12, 1907, p. 1; Mar. 13, 1907, p. 1; Mar. 16, 1907, p. 1; Mar. 19, 1907, p. 6; Mar. 25, 1907, p. 1; Mar. 27, 1907, p. 1.

[11] St. John, Vincent: The I. W. W., Its History, Structure, and Methods. Chicago, 1919, p. 20.

[12] Brissenden, Paul: The I. W. W. New York, 1919, p. 229.

[13] Solidarity, Sept. 16, 1911, p. 2; Industrial Worker, Apr. 6, 1911, p. 4.

[14] Solidarity, July 15, 1911, p. 3; Aug. 12, 1911, p. 1; Jan. 13, 1912, p. 1.

[15] Industrial Worker, Nov. 23, 1911; Solidarity, June 15, 1912, p. 2.

[16] Aberdeen World, Mar. 14, 1912, pp. 1, 6; Mar. 15, 1912, p. 1; Mar. 16, 1912, p. 1, et seq.; Mar. 18, 1912, p. 1; Mar. 19, 1912, pp. 1, 8; Mar. 22, 1912, pp. 1, 4; Mar. 23, 1912, pp. 1, 4.

On March 24 the Aberdeen Trades Council refused to indorse the strike. Violence began on March 25, and the day following there was a noon riot at a plant in the heart of Aberdeen, and the police used force in quelling the rioters. On March 27 a committee of citizens began efforts to settle the strike. On April 1 the police began to round up the I. W. W. leaders on Grays Harbor, of whom 45 were arrested, and the I. W. W. hall was closed. At Hoquiam 150 strikers were loaded into box cars, held for a few hours, and finally threatened and released.[17] The strikers claimed that the reason the men were not actually deported was because of the opposition of the mayor of Hoquiam and the refusal of the railway company to move the cars.[18]

Meanwhile the strike had spread to Willapa Harbor where all the Raymond mills but one closed on March 26. Four hundred and sixty deputies were sworn in and about 50 Finns and 150 Greeks were shipped out of town. The deportation of the Greeks caused considerable trouble, as they appealed to the Greek consul in Tacoma and he came back with them to Raymond. He was, with difficulty, prevailed upon to advise his countrymen to leave Raymond for good and they went to Tacoma. Following this the mills soon resumed and generally secured full crews again. South Bend, 4 miles from Raymond, was not affected.[19]

On April 2 the Grays Harbor strikers formulated their demands, which included the payment of the union scale, all strikers to be reinstated, and a preferential union shop to be established. These demands were signed by representatives of the Shingle Weavers' Union, the I. W. W., the Lytle mill workers, the Longshoremen's Union, and the Marine Transport Workers' Union of the I. W. W.[20] The citizens' committee proposed that the strike be settled on the basis of a minimum wage of $2.25 per day; that preference should be shown to American labor; that no members of the I. W. W should be employed; and that an otherwise strictly open shop should be maintained. To guarantee that there should be no discrimination the committee recommended that an impartial employment bureau should be established, to be financed by the mills but managed by the citizens' committee. The mills accepted these proposals [21] and, although the strikers do not seem formally to have accepted the proposals or called the strike off, crews were rapidly secured, and by April 17 all mills were once more running with full crews.[22]

While the Grays Harbor trouble was still unsettled the I. W. W. issued a call to all lumber workers in western Washington to strike on April 19. The demands were for union recognition, better living conditions in the camps, a nine-hour day and a minimum wage of $3 per day. On May 7 the strike was called off without any agreement with the employers and without gaining any of their demands. The I. W. W. claimed that 5,000 men struck and closed 46 camps, but this is doubtless a great exaggeration.[23]

The years following 1912 were distinctly unfavorable for the I. W. W. In 1913 it had a number of small strikes in the fir region,

[17] Aberdeen World, Mar. 25, 1912, pp. 1, 4, 8; Mar. 26, 1912, pp. 1, 2, 4; Mar. 27, 1912, pp. 1, 6; Apr. 1, 1912, pp. 1, 6; Apr. 2, 1912, pp. 1, 6.
[18] Shingle Weaver, Apr. 29, 1912.
[19] South Bend Journal, Mar. 29, 1912, pp. 1, 4; Apr. 5, 1912, pp. 1, 4.
[20] Aberdeen World, Apr. 3, 1912, pp. 1, 6.
[21] Idem, Apr. 5, 1912, pp. 1, 8.
[22] Idem, Apr. 8, 1912, p. 1; Apr. 17, 1912, p. 1.
[23] Industrial Worker, Apr. 18, 1912, p. 1; Apr. 25, 1912, p. 4; May 16, 1912, p. 4; June 9, 1912, p. 1.

particularly one at Marshfield, Oreg., and another on Puget Sound and Grays Harbor. In spite of great claims made for them by the I. W. W., neither of the strikes seem to have been of much consequence. The I. W. W. does not seem to have been well organized or very strong, and the market was not in a condition to favor the strikes.[24] At this time the I. W. W. was suffering a decline in membership and strength and it was several years before it recovered the loss. In September, 1913, the total membership reported to the eighth I. W. W. convention was 14,250, of whom 640 were in the lumber workers' national union.[25] In March, 1914, the Industrial Worker suspended publication and its list was taken by Solidarity.[26]

CHANGE IN METHOD OF ORGANIZATION.

During this period of decline there was much analysis of the plans and tactics of the I. W. W. in an attempt to find and remedy the faults which had brought the organization to this condition. A reading of Solidarity shows that there was a large degree of agreement among the members of the I. W. W. that they had been following a wrong lead in their methods of organization and propaganda. When they began to organize the migratory workers there was but little precedent to guide them, and they had to work out a type of organization which was within their limited means, which would reach the workers, and which would hold them. The plan adopted met the first two conditions but in practice it failed in the third. This plan was to hold street meetings in the cities where the loggers congregated when out of work, and thus to secure their attention and interest. There was a general feeling that the migratory worker had no very great love for his job and that the place to which to tie him was the central local. However, as the men did not work in the cities where the central locals were, they were out of touch with their union when they went back to work, and since with the majority of this type of worker "out of sight is out of mind," they rapidly lost all interest in the union. An I. W. W. organizer who was in close touch with the lumber and logging strikes in 1912 and 1913 claimed that it was the distance between the local and the job which caused the loss of the strikes.[27]

One of the earliest and most successful experiments in a better coordination of job and union was undertaken by the Marshfield, Oreg., Lumber Workers' Local No. 435, which was organized in the fall of 1911, on the basis of what was then called the "camp delegate system." All of the lumber workers in the Coos Bay region were urged to join the Marshfield local. It planned to establish permanent branches, with a building and a secretary in charge at each important point on the bay. On each job a delegate would be placed who would sign up new members, receive payment of dues, hold meetings, and, in general, look after the interests of the men on the job. In case the job delegate should be discharged or quit, it was a very simple matter to appoint another member to act in his stead, and no possible amount of labor turnover could interfere with this

[24] Washington, State Bureau of Labor, Biennial report, 1913-1914, pp. 119, 120; Solidarity, June 7, 1913, p. 1; July 12, 1913, p. 4.
[25] Timber Worker, Oct. 25, 1913, p. 2.
[26] Solidarity, Mar. 28, 1914, p. 1.
[27] Idem, Jan. 10, 1914, p. 3.

arrangement, provided, of course, that a single member of the union remained on a job.[28] This type of organization was widely copied by the lumber workers.[29] There were never many autonomous locals but most all locals had several branches and job delegates who could enroll new members, collect dues, sell literature, direct the members in their activities, and keep them in touch with the union. From such an environment it was natural for the members to make the I. W. W. hall their headquarters when they went to town.

This change in the method of organization of the I. W. W. locals was accompanied by an equally great change in the attitude toward the job. The early leaders accepted the idea that the ties which bind a man to his job should be as tenuous as possible, and the fact that a man left his union behind when he went to his job would serve to draw him away from the job; it would keep the members very mobile. They thought that the best member was the one who was most foot-loose, the one who could move most readily.[30] Psychologically there is a very close connection between this hatred of the job and sabotage. The crippling of a machine through the removal or breaking of an essential part is of the same nature as the crippling of an organization through the removal of a key man. But the I. W. W. found that its own strength depended on binding the members to their jobs. This attitude toward the job tended to break down the sentiment in favor of sabotage.

During the period of experimentation, of finding itself with regard to its attitude toward the job, the I. W. W. advocated and practiced sabotage, not merely the "conscious withdrawal of efficiency" but the more destructive kind as well. The files of its papers from 1912 to 1917 are full of praise of sabotage and records of its successful use. The ninth annual convention at Chicago on September 24, 1914, passed unanimously and without debate the following resolution: "That all speakers be instructed to recommend to the workers the necessity of curtailing production by means of 'slowing down' and sabotage. All rush work should be done in a wrong manner."[31] Following out a recommendation of this convention a pamphlet and a book on sabotage were adopted as a part of the I. W. W. propaganda and circulated as widely as possible by the organization.[32] The editor of the Industrial Worker, in a series of editorials on sabotage, described and recommended nearly every possible kind of sabotage, and the only qualification he made as to their use was that sabotage must not be so used as to injure fellow workers or consumers, although scabs and those who disregarded a well-advertised boycott were expressly excluded from this protection.[33] From 1912 to 1917 the wooden shoe and the black, snarling cat, two emblems of sabotage, were common illustrations in the I. W. W. press. Members of the union report that early in 1915 the I. W. W. held meetings in Seattle under the direction of some of the national leaders, at which the question of the relative merits of individual sabotage and job solidarity were discussed, with 50 to 1 in favor of the former.

[28] Industrial Worker, Feb. 1, 1912, p. 3.
[29] Solidarity, Jan. 3, 1914, p. 3; Nov. 21, 1914, p. 2 et seq.; Nov. 28, 1914, p. 2.
[30] Idem, Nov. 21, 1914, p. 3; Feb. 2, 1916, p. 2; Sept. 30, 1916, p. 3.
[31] Idem, Oct. 3, 1914, p. 4.
[32] Solidarity, Oct. 3, 1914, p. 4; Apr. 10, 1915, p. 1; Evidence and Cross-examination of William D. Haywood in the Case of the United States v. Wm. D. Haywood et al., by Wm. D. Haywood, Chicago, 1918, p. 142 et seq.
[33] Industrial Worker, Jan. 23, 1913, to Apr. 24, 1913.

FORMATION OF LUMBER WORKERS' INDUSTRIAL UNION, NO. 500.

The National Industrial Union of Forest and Lumber Workers went to pieces during the depression of 1914–15, although lumber workers' locals continued to exist in a number of places, particularly at Seattle, Tacoma, Portland, and Spokane. In the summer of 1916 none of them had many members, there being but 50 in the Seattle local.[34] In February, 1916, the Spokane local became a branch of the Agricultural Workers' Organization of the I. W. W. and, with the financial backing of that body, began an aggressive membership drive among the lumber workers of the Inland Empire.[35] On April 1, 1916, the Industrial Worker was revived.[36] On July 3, 1916, a conference of several hundred I. W. W. lumber workers was held at Seattle, which decided to launch a vigorous membership campaign to line up the loggers in the I. W. W.[37] At its annual meeting in Minneapolis, about November 1, 1916, the Agricultural Workers' Organization voted to advise the lumber workers among its members to form an independent industrial union. The tenth convention of the I. W. W. supported this move. As a result the Lumber Workers' Industrial Union No. 500 was formed in Spokane on March 5–6, 1917.[38]

Meanwhile things had not been going so well with the I. W. W. on the West Coast, where it had become involved in trouble at Everett, growing out of the shingle weavers' strike there. The I. W. W. conducted a free-speech fight which grew more bitter as it grew older, and which culminated on November 5, 1916, when the Seattle I. W. W. chartered a steamer and took about 250 of its members to Everett to enforce its "right" to speak on the street. When the steamer reached Everett the sheriff ordered them not to land. Immediately shooting began, whether from the boat or wharf was never determined, and two men on the wharf and five on the steamer were killed and a number wounded. None of the passengers landed from the steamer, but all returned on it to Seattle, where they were removed either to the hospital or to the city jail. Some were later released, but 74 were charged with murder On the trial in Seattle, in the spring, on a change of venue, the one man brought to trial was acquitted, after which the others were released.[39]

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[34] The I. W. W. in the Lumber Industry, by James Rowan, Seattle, 1919, p. 24; The Everett Massacre by Walker C. Smith, p. 34.
[35] Rowan, James: The I. W. W. in the Lumber Industry, Seattle, 1919, p. 25.
[36] Smith, Walker C.: The Everett Massacre, p. 36.
[37] Solidarity, July 15, 1916, p. 1.
[38] The I. W. W. in the Lumber Industry, by James Rowan, Seattle, 1919, pp. 25, 30; Proceedings of tenth I. W. W. convention, p. 150.
[39] The I. W. W. and the Law: Everett, by N. F. Coleman, in Sunset Magazine, July, 1917, pp. 35, 68–70; The I. W. W. and the Golden Rule, by W. V. Woehlke, in Sunset Magazine, February, 1917, pp. 16–18, 62–65; The Everett Massacre, by Walker C. Smith.

CHAPTER IX.—THE 1917 LUMBER WORKERS' STRIKE.

BEGINNING OF STRIKE.

The strike in the lumber industry in the Northwest during the summer of 1917 deserves special attention, not only because it was by far the most extensive labor disturbance the industry had ever known, but also because it furnishes the key to an understanding of the industrial problems therebefore and since. This strike, which extended to most of the West Coast, brought to a head many influences and tendencies which had been gathering strength for years, and in its settlement set in motion forces which have profoundly affected the subsequent course of industrial relations.

An improvement in the lumber market during 1916 and the early part of 1917 increased the demand for labor to a point where the leaders of both the I. W. W. and the American Federation of Labor felt that the time had come to make a determined stand for an improvement in conditions and a shortening of the working-day. This intention to make these demands as soon as the time should be opportune guided the activities of both groups. At the Spokane convention of the I. W. W. on March 5–6, 1917, it was agreed that the time had arrived to strike for better conditions, and a set of demands were drawn up. These may be summed up in four requests—better living conditions in the camps, the 8-hour day, better wages, and union recognition.[1]

The actual strike began in April, 1917, on the log drives[2] of Idaho and western Montana and caused considerable trouble.[3] About June 15 several hundred men employed in the camps of a plant near Sand Point, Idaho, walked out because they were tired of conditions, especially the food. The I. W. W. immediately supported this strike and issued a call for a strike of all lumber workers in the Spokane district, comprising eastern Washington, Idaho, and western Montana. The call brought out a large portion of the men from the camps and some from the mills. Nearly all the camps but only a few mills closed. Early in July the I. W. W. claimed that 20,000 men were out, but this is probably about ten times the true figure. There had probably never been as many as 10,000 men employed in the mills and camps of that region at one time, and one-fifth seems to be a liberal estimate of the number who struck. Charges of violence and terrorism were freely made by both sides, probably partly true and partly false in both cases.[4]

SPREAD OF STRIKE TO WEST COAST.

During the spring and early summer there were a number of small, local disturbances on the West Coast, but it was not until July 14 that the big strike broke there. At the annual convention of the

[1] West Coast Lumberman, Apr. 1, 1917, p. 42.
[2] In some parts of Idaho and Montana many of the logs are "driven" to the mills rather than moved by rail. In "driving" logs advantage is taken of high water to float the logs downstream.
[3] West Coast Lumberman, May 1, 1917, p. 30; Solidarity, Apr. 28, 1917, p. 1; June 9, 1917, p. 4.
[4] Solidarity, June 30, 1917, p. 1; July 7, 1917, pp. 3, 6; July 14, 1917, p. 3; July 21, 1917, p. 1; Oregonian, July 2, 1917, p. 8; July 11, 1917, p. 1; Aberdeen World, July 12, 1917, p. 2.

Shingle Weavers' Union on May 21, 1917, the union instructed the executive board to write to all the shingle mills in an endeavor to secure the eight-hour day by conference. In case this attempt had not succeeded by June 20, the board was instructed to call a special convention for June 30. The special convention voted to call a strike on July 16, and opened the charters of all the locals for new members.[5] On July 6 the Timber Workers' Union, in convention at Aberdeen, drew up a set of demands. The most important of these were for a minimum wage of $3 for eight hours in the mills and $3.50 for nine hours in the camps; better sanitary arrangements in mills and camps; greater freedom from control by the employer in matters not properly a part of the work, as for example, employers' censoring of mail in camps; union recognition; and the closed shop. The union demanded a conference before July 12, with a threat of a strike on July 16 if its demands were not granted.[6] On July 10 the president of the Timber Workers' Union and the president of the Shingle Weavers' Union conferred in Aberdeen and agreed that the two unions should work in closest harmony in all matters pertaining to the strike.[7]

Instead of conferring with the union as requested, the employers got together on July 9 and decided to fight. At this meeting the Lumberman's Protective Association was formed to resist the demands of the union. It was decided to raise a campaign fund of a half million dollars and to fine any member who operated his plant less than 10 hours per shift $500 per day. A strong executive committee was elected and the following resolution adopted:

Resolved, That the establishment of an 8-hour day in the lumber industry at this time when production in all manufacturing industries must be maintained at the maximum is impossible, and that employers therein hereby pledge themselves unequivocally to maintain a 10-hour day for the purpose of maintaining the maximum production in the lumber industry.[8]

Attempts were made by Federal and State officials to bring the two parties together, but although the unions were willing to accept mediation the employers refused, and nothing came of it.[9]

Meanwhile the I. W. W. had been actively discussing a strike, especially during the first week in July, when the camps were shut down. About the time the camps resumed the I. W. W. sent out from its Seattle office on July 9 a notice to all its members to the effect that it had called no strike and advised the workers not to "fall for the bunk" of a timber workers' strike.[10] A few days later a conference of I. W. W. leaders and job delegates was held at Seattle to canvass the situation and decide on a course of action. It was the general feeling at this meeting that all the members of the I. W. W. would go out on July 16 with the timber workers. It was decided that the time to strike had come, and a strike call was issued. The delegates went back to the camps with the word: "Boys, the strike is on; roll up and get out." Most of these delegates reached the camps on July 13, and the strike began the next morning. The

[5] Shingle Weaver, May 26, 1917; June 30, 1917; July 7, 1917.
[6] Aberdeen World, July 6, 1917, p. 1; Oregonian, Portland, Oreg., July 7, 1917, p. 6.
[7] Aberdeen World, July 11, 1917, p. 2; Shingle Weaver, July 14, 1917, p. 1.
[8] Aberdeen World, July 10, 1917, pp. 1, 4; Oregonian, July 10, 1917, p. 14; "Tying up western lumber," by E. Merz, in New Republic, Sept. 29, 1917, pp. 242-244.
[9] Aberdeen World, July 9, 1917, p. 1; July 10, 1907, p. 1; July 11, 1907, p. 2; Oregonian, July 11, 1917, p. 16; July 16, 1917, p. 1.
[10] Aberdeen World, July 3, 1917, p. 4; July 9, 1917, p. 3; July 10, 1917, p. 4.

action of the I. W. W. in striking two days before the other unions may be partly explained by the bitter feeling between the two groups, but probably a better explanation is the well-known I. W. W. plan of surprise attacks on the employer. Monday, July 16, the timber workers and shingle weavers went out as they had planned, and the strike of the three unions spread rapidly over the West Coast.

The I. W. W. demands, formulated and presented some time after the strike began, were similar to those of the timber workers. These included a demand for an 8-hour day in both mills and camps, with a minimum wage of $3.50 per day in all places; more sanitary and attractive camps; the abolition of the hospital fee,[11] piecework, and bonus systems, and no discrimination against the I. W. W., but included no demand for the closed shop.[12] The I. W. W. did not expect to secure all of these demands, but the strike was a protest against conditions under which its members had long suffered, and the inclusive nature of the demands reflected the thwarted ideals of years. These demands show that the causes of the strike can not be found in any single incident, such as the Everett trouble of the preceding fall. It was an outburst of resentment against conditions which had been growing more and more intolerable for years, but for which no remedy had theretofore been apparent.[13]

EXTENT OF STRIKE.

On August 1 the West Coast Lumberman reported that probably 75 per cent of the lumber production in western Washington had been cut off by the closing of the mills, but it denied that all of the mills which were shut down had been forced to close by strike trouble, as some of them claimed to have been able to continue cutting had they so desired. A few days later a representative of the American Lumberman reported that not over 15 per cent of the mills on the West Coast were running.[14]

It is extremely difficult to estimate the number of men actually on strike. The President's Mediation Commission reported that the industry in the Northwest employed about 70,000 men, but this included the eastern parts of Oregon and Washington, Idaho, and western Montana, as well as the West Coast region. As over three-fourths of the men employed in the industry in the whole Northwest are on the West Coast, it seems safe to place the number of men in the West Coast strike district as something over 50,000 at the beginning of the strike. The number of men idle was then probably between 40,000 and 50,000. How many of these were actually strikers and how many were idle because of fear, intimidation, or the closing of the plants in which they worked, it is impossible to say. The employers claimed that at least 75 per cent of the men would return to work were it not for the pickets.[15] In line with this estimate is the estimate of Carleton H. Parker that the I. W. W. membership was not to exceed 3,000, although there were about 7,000 who were

[11] Most mills and camps held back from the wages a charge of $1 per month for hospital fee, which entitled the worker to free hospital care in case of injury or illness.
[12] Solidarity, Aug. 11, 1917, p. 7.
[13] Washington State Bureau of Labor. Biennial report, 1917–1918, pp. 65–67; President's Mediation Commission, Report on the labor troubles in the lumber industry, in the sixth annual report of the United States Secretary of Labor; The Casual Laborer, by Carleton H. Parker, pp. 91–124.
[14] West Coast Lumberman, Aug. 1, 1917, p. 26; The Telegram, Portland, Oreg., Aug. 7, 1917, p. 2.
[15] Washington State Bureau of Labor, Biennial report, 1917–1918, p. 73; Four L Bulletin, March, 1922, p. 17; Four L News Letter, May 15, 1922, p. 1; West Coast Lumberman, Sept. 1, 1917, p. 19.

supporting them and actively joining in the strike.[16] The shingle weavers' and timber workers' unions were very weak, but it is impossible to state their exact membership. At the American Federation of Labor convention in the fall of 1917 they voted a strength of 500 and 200, respectively, but undoubtedly there was a larger number of striking members on whom they were not paying dues. On March 2, 1918, the former had a membership of 206 and the latter of 2,324.[17] It is probable that a large number of strikers joined one or more of the unions, paid dues once, perhaps for several months in advance, and then paid no more attention to the organization. Probably 10,000 would be a safe maximum figure for the combined membership of the three unions during the summer of 1917, and it might easily have been as small as half that figure. The total number of strikers could not have exceeded 20,000 and was probably less.

THE EIGHT-HOUR DAY ISSUE.

As the strike developed all the demands except that for the eight-hour day dropped into the background and the struggle was fought out on that question. Attempts at mediation were made by various public agencies, but nothing came of them. At Raymond a conference was held, but without results. The mayor stated that the reason for the failure was that the West Coast Lumberman's Association (he probably meant the Lumberman's Protective Association), to which the operators belonged, would not permit them to recognize the union nor grant the eight-hour day.[18] Early in August a meeting of strikers and employers was held with the Washington State Council of Defense, at which the strikers presented two propositions and the employers one. The men proposed either that they be given an 8-hour day with 8 hours' pay until they could show that they were doing as much in 8 hours as formerly in 10, or else a 9-hour day with 10 hours' pay until April 1, 1918, when the day should be shortened to 8 hours without decrease in daily wage. The latter proposition carried a pledge to cooperate in efforts to secure a national 8-hour day in the lumber industry. The employers proposed a return to work on the old conditions with a referendum to be held on January 1, 1918, under the State Council of Defense, to choose between an 8-hour day with 8 hours' pay or a continuance of the 10-hour day. This also carried a promise to work for a national 8-hour day. All three propositions were rejected.[19]

INTERVENTION OF THE GOVERNMENT.

Late in July the strike began to interfere with the supply of lumber for the Camp Lewis cantonment, and soon after the ship carpenters on Grays Harbor refused to handle lumber from 10-hour mills.[20] The Government was thus brought into the trouble and Secretary of War Baker and Governor Lister, of Washington, urged the employers to grant the 8-hour day with time and a half for overtime. The latter did the unprecedented thing of issuing a

[16] Parker, Carleton H.: The Casual Laborer, p. 114.
[17] American Federation of Labor. Proceedings of thirty-eighth annual convention, 1918, p. 22.
[18] Oregonian, Portland, July 31, 1917, p. 5.
[19] West Coast Lumberman, Aug. 15, 1917, p. 21 et seq.
[20] Oregonian, Portland, Oreg., July 26, 1917, p. 6; Seattle Union Record, Aug. 4, 1917, p. 1; Washington State Bureau of Labor, Biennial report, 1917-1918, p. 67.

proclamation calling upon the employers to concede the 8-hour day with 9 hours' pay and time and a half for overtime, but the employers would not yield.[21] The lumbermen believed that the 8-hour day was economically impossible owing to the keen competition of other lumber regions where camps and mills were running 10 hours.[22] This interference of the Government was bitterly resented by many of the employers.

At the very outset of the strike Secretary Baker and Governor Lister sent troops to Grays Harbor to protect mills which were cutting lumber for the Camp Lewis cantonment.[23] The I. W. W. established picket camps near every struck camp that they could reach and attempted in every possible way to prevent men from going into the camps, while the other unions did most of the picketing in the mills. In some places, particularly at Raymond, injunctions were secured to prevent picketing, and some strikers were fined for violating the injunctions.[24]

TERMINATION OF STRIKE.

It was estimated that about 10 per cent of the mills and camps, about 150 in all, mostly shingle mills, granted the 8-hour day and were able to resume. None of these were members of the Lumberman's Protective Association.[25] Some of these mills later went back to a 10-hour day, and the unions declared it was because of the pressure of the Loggers' Association, which refused to supply logs to 8-hour mills.[26] It is more reasonable to account for the shortage of logs for 8-hour mills by the fact that there were not logs enough for all mills, and the loggers naturally preferred to furnish logs to mills which stood with them in the fight for 10 hours.

By September 1 it was apparent to the leaders of the I. W. W. that they would not be able to bring the employers to terms by means of a prolonged strike, since strike funds were running low and the men were drifting back to their jobs, permitting the mills and camps to reopen. Accordingly, a referendum was held to determine the sentiment of the members with regard to a future policy. While no report was ever made as to the exact vote cast, it was announced that the result of the referendum was to transfer the strike to the job, and most of the members of the I. W. W. went back on the job to continue the strike there.[27] The shingle weavers and timber workers did not officially call the strike off, but they permitted their members to return to work. The former held a special convention late in October and decided not to call the strike off until the 8-hour day was universal in the shingle mills, but it permitted any local union to determine its attitude with regard to resuming work.[28]

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[21] Washington State Bureau of Labor, Biennial report, 1917–1918, p. 67 et seq.; Oregonian, Portland, Oreg., Aug. 16, 1917, p. 15.
[22] West Coast Lumberman, Aug. 15, 1917, p. 19; U. S. Congress, House of Representatives, Select Committee on Expenditures of the War Department, Subcommittee on Aviation Testimony, vol. 2, pp. 1182–1192 (66th Cong., 2d sess.).
[23] Aberdeen World, July 18, 1917, p. 1; July 19, 1917, p. 1.
[24] Letter of L. L. Thompson, Attorney General of Washington, Apr. 1, 1919; South Bend Journal, Sept. 7, 1917, p. 1; Sept. 21, 1917, p. 1; West Coast Lumberman, Sept. 15, 1917, p. 22.
[25] Washington State Federation of Labor, Proceedings of seventeenth annual convention, 1918, p. 72 et seq.; Oregonian, Portland, Oreg., July 29, 1917, p. 7
[26] Shingle Weaver, July 28, 1917; Aug. 11, 1917.
[27] Solidarity, Sept. 29, 1917, p. 8.
[28] Shingle Weaver, Oct. 27, 1917.

The employers took the general position that the strike was a good thing for the industry in that, among other things, it saved the market from a collapse, it demonstrated the solidarity of the employers, it showed the radical nature of the unions, and it eliminated disturbing elements. They had early taken the position that they could open their plants when they were ready, but that they preferred to fight the matter out once for all. It is probably true that they could have resumed sooner had they made a determined effort to do so, but it is also probably true that six months later they would have made a different statement with regard to the seriousness of the situation.[29]

I. W. W. "STRIKE ON THE JOB."

When the mills resumed operations in September, 1917, the Shingle Weavers' and Timber Workers' Unions dropped out of sight, and the remaining trouble was furnished by what the I. W. W. called its "strike on the job" or "job strike." In this type of strike the workers remained on the job, but they did everything possible while there to hinder production and reduce profits. The tactics practiced there were slowing down, rapid shifting from job to job, and sabotage. In the slowing-down process, or the "conscious withdrawal of efficiency," they very definitely curtailed production, sometimes to less than one-fourth of normal. One report states that at a camp where the normal production was 50 cars of logs per day, demands were presented and refused. Immediately the output began to fall off. Each day's production was 5 cars less than the day before. The demands were finally granted when output reached but 5 cars per day. In shifting to increase turnover and disrupt the organization two general lines were followed—sometimes the crew would quit in a body when things did not suit them; at other times they would quit at the end of eight hours and be discharged for it. As there was a shortage of men they had little difficulty in getting work elsewhere. Sometimes the crew were not all I. W. W., and some of them were loath to leave, in which case intimidation had to be used to get them to go with the rest. As the I. W. W. was stronger in the camps than in the mills these tactics were more often used there, but slowing down and a large turnover were common in both places.[30]

The extent to which sabotage, other than that just referred to, was practiced by the I. W. W. is naturally hard to determine. The I. W. W. had advocated sabotage in such a situation, but during this period, in view of war prosecutions, had changed the nature of its propaganda and now insisted that it was not its purpose to destroy any property, as it intended to take all property over for itself—it only aimed to destroy profits. But the hope of taking possession of machinery some time in the future will act as a deterrent only to the most optimistic radical. In addition, the hobo laborers, the type of labor prevalent in the industry, would be expected to have little regard for law or property even in the absence of I. W. W. propa-

[29] West Coast Lumberman, Aug. 1, 1917, p. 19; Sept. 15, p. 19.
[30] Industrial Worker, issues during fall and winter, 1917–18; Loyal Legion publications during the war period.

ganda in favor of sabotage. That the I. W. W. as an organization advocated or practiced sabotage during this period has not been proven, but there seems to be an abundance of evidence that individual members of the organization did resort to such practices as driving spikes in logs to break the saws, putting emery dust in machinery, wasting material through careless work, and similar methods. The only conviction secured was that of three members of the I. W. W. who went into a logging camp in the Olympic National Forest and induced the crew of fire fighters to strike while a forest fire was raging. For this they each served one year in the Federal prison.[31]

[31] As to this conviction see West Coast Lumberman, Jan. 15, 1918, p. 34; records in the office of the United States district attorney, Seattle, in the Case of Thomas Noal, Robert Solen, and E. A. Matson. On the general subject of sabotage during this period, see U. S. Congress, House of Representatives, Select Committee on Expenditures in the War Department, Subcommittee on Aviation, Testimony, vol. 2, pp. 957 et seq., 1182–1192; Final report, p. 33 (66th Cong., 2d sess.).

CHAPTER X.—ORGANIZATION OF LOYAL LEGION OF LOGGERS AND LUMBERMEN.[1]

OBJECT OF ORGANIZATION.

When the members of the I. W. W. carried the strike to the job and proved that, although they were regularly at work, they could seriously interfere with lumber production, the Government had to adopt other measures to secure the requisite amount of airplane material. In August, 1917, the shipment of airplane material was but 202,264 feet. The mills resumed operation in September and shipments increased to 2,683,307 feet and in October reached 3,495,175 feet. Then there was a slight falling off in November. Not only were these shipments far below the requirement of 10,000,000 feet per month, but less than half of the lumber shipped was suitable for actual construction. Furthermore, demands were increasing.[2]

A representative of the War Department had been sent to Portland in the early summer to supervise and inspect purchases of airplane material, but he failed to secure sufficient supplies, and early in October Col. Brice P. Disque was sent to the West Coast to investigate conditions connected with the production of airplane materials. He spent about two weeks investigating and reported to Washington early in November, following which he was sent back to Portland with definite orders to get the lumber needed.

While on his tour of investigation in October, Colonel Disque held a conference with 12 or 15 of the leading employers of the West Coast, at which one of the loggers suggested that the Government organize a patriotic organization of some kind, a "loyal legion," to line up the workers behind the Government program. This suggestion was enthusiastically received by the other employers and by Colonel Disque, and from it the Loyal Legion of Loggers and Lumberman, commonly called the "Four L," was born a month later.[4] As so conceived the Four L was to be merely a propaganda agency to counteract the I. W. W., and as such it was carried on for a considerable period.[5] After his return to Portland on November 15, Colonel Disque perfected the plans for the launching of the Four L and submitted them to Secretary of War Baker, who on November 23 approved them in a telegram in which he said: "I heartily approve and highly recommend the plan and am convinced the organization will prove a great asset to the Government in the successful prosecution of the war."[6]

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[1] See Loyal Legion of Loggers and Lumbermen, by E. B. Mittelman, in Journal of Political Economy, June, 1923, pp. 313-341, for a short study of the Four L with differing conclusions.

[2] U. S. War Department Division of Military Aeronautics. History of the Spruce Production Division, pp. 15, 55.

[3] Idem, p. 7; U. S. Congress, House of Representatives, Select Committee on Expenditures of the War Department, Subcommittee on Aviation, Testimony, vol. 2, p. 1361 (66th Cong., 2d sess.).

[4] U. S. Congress, House of Representatives, Select Committee on Expenditures of the War Department, Subcommittee on Aviation, Testimony, vol. 2, p. 1365 (66th Cong., 2d sess.); Interview with Ralph Burnside, December, 1921.

[5] Four L Monthly Bulletin, March, 1918, p. 8; Interview with M. E. Crumpacker, December, 1921.

[6] Four L Monthly Bulletin, June, 1918, p. 17.

RECRUITING METHODS.

The first Four L local was organized at Wheeler, Oreg., on November 30, 1917, when the entire crew of 110 men joined. A vigorous policy of recruiting was undertaken, and by January 1, 10,000 members had been enrolled. By January 24 there were 300 locals with 35,000 members. Of these locals 105 were on Grays Harbor, the center of spruce production.[7] The pledge which all members signed read as follows:

I, the undersigned, in consideration of my being made a member of the Loyal Legion of Loggers and Lumbermen, do hereby solemnly pledge my efforts during the war to the United States of America, and will support and defend this country against enemies both foreign and domestic.

I further agree, by these presents, to faithfully perform my duty toward this company by directing my best efforts, in every way possible, to the production of logs and lumber for the construction of Army airplanes and ships to be used against our common enemies. That I will stamp out any sedition or acts of hostility against the United States Government which may come within my knowledge, and I will do every act and thing which will in general aid in carrying this war to a successful conclusion.[8]

The membership card read:

This is to certify that —— has become a member of the Loyal Legion of Loggers and Lumbermen for the duration of the war by taking oath to devote his efforts to the production of logs and lumber for Army airplanes and ships, to be used against our common enemy, and to do every act or thing within his power to further the cause of the United States of America in the present conflict.

By authority of the Secretary of War.

(Signed) M. E. CRUMPACKER,
First Lieutenant, Signal Corps,
U. S. Army, Officer in Charge.

Maurice E. Crumpacker, under Colonel Disque, was in charge of the Four L during the war.

At the same time the Four L was being organized to reduce discontent among the workers, soldiers were brought in to fill the gaps caused by the withdrawal of many men who went into the Army or were lured into other industries by better wages or conditions. An Army division, known as the "Spruce Production Division," was organized and sent into the camps and mills which had a labor shortage. The division was composed of enlisted and conscripted men, most of whom were unfitted for overseas service but who were also unfamiliar with the work to be done. They received the same pay as civilians. However, the presence of the soldiers probably checked the rise in wages by relieving the labor shortage.[9]

The officers and some of the enlisted men of the Spruce Production Division acted as recruiting officers for the Four L and charges were frequently made that workers were coerced into joining the Four L and that the officers deliberately interfered with the organization activities of the Timber Workers' Union.[10] During January, 1918, some crews refused to work with men who would not join the Four L.[11] At the Portland convention of employee representatives, on

[7] "The man who heads the spruce drive," by S. H Clay, in Review of Reviews, June, 1918, pp 633–635. U. S. War Department, Division of Military Aeronautics, History of the Spruce Production Division, p. 20. The Telegram, Portland, Oreg., Jan. 24, 1918, p. 8.

[8] Quoted in "The Northwest Front," by W. A. Wolff, in Collier's, Apr. 20, 1918, p. 32.

[9] See U. S. War Department, Division of Military Aeronautics, History of the Spruce Production Division; U. S. Congress House of Representatives, Select Committee on the Expenditures of the War Department, Subcommittee on Aviation, Testimony (66th Cong., 2d sess.).

[10] Industrial Worker, Jan. 19, 1918, pp. 3, 4; Timber Worker, July 13, Aug. 17, and 24; Sept. 7, and Dec. 28, 1918; International Union of Timber Workers, Proceedings of 1919 convention, p. 9; Washington State Federation of Labor, Proceedings of 18th annual convention, 1919, p. 150.

[11] West Coast Lumberman, Jan. 15, 1918, Oregonian, Portland, Oreg., Jan. 21, 1918, p 18

March 4, 1918, the sentiment of the men was very strong in favor of refusing to have anything to do with a man who would not join the Four L, but they were advised that it was not thought wise to force men to join.[12] On June 22, at the Spokane convention of employee representatives, Colonel Disque said:

> The Loyal Legion has not forced anyone to join it. * * * You will find men among your crews who are not willing to join at once. Talk with them. Be reasonable with them. Give them every chance in the world to see that they are on the wrong track. Then if they refuse to join tell them to get out; we have no place for a man not willing to sign a pledge of loyalty to his country to-day.[13]

At the Portland employees' convention on August 5, and also at the Spokane convention the following week, Colonel Disque declared that he disapproved of the attempts of the Timber Workers' Union to organize the lumber industry at that time. The official attitude was that men should be urged to join the Four L, but that no one should be forced to quit work because he would not join.[14] In the light of such official statements it would not be at all surprising if members of the Four L, employees, employers, or subordinates of Colonel Disque, should go to considerable lengths in signing up members.

ESTABLISHMENT OF EIGHT-HOUR DAY.

The first official action of the Four L was the establishment of the eight-hour day, with time and half for overtime, effective March 1, 1918. The industry had been in a state of seething unrest for months, and it seemed to a large number of the best informed men in the industry and in the Government that it would not be possible to settle these troubles until the eight-hour day was granted. Governor Lister, Secretary of War Baker, the chairman of the Washington Council of Defense, and the President's Mediation Commission all believed that the eight-hour day was essential to industrial peace and recommended that it be establised. The Mediation Commission, in particular, took the position that in view of the common observance of the eight-hour day in the Northwest it was especially necessary in the lumber industry.[15]

There were also numerous employers, particularly owners of shingle mills or logging camps, who believed that it was necessary to grant the eight-hour day to quiet the unrest. The lumber men of the Inland Empire voted to establish the eight-hour day on January 1, 1919, but later reconsidered their action on the ground that it was a matter of individual determination, but many of them actually established the shorter day.[16] On the West Coast many employers granted the shorter day between July 1, 1917, and March 1, 1918, and others were planning to take similar action. It was widely believed that a number of the leading employers were chafing under the restraint of the Lumberman's Protective Association and were seeking a way to grant the shorter day without disrupting the

[12] Oregon Journal, Portland, Oreg., Mar. 5, 1918, p. 9: Four L Convention, Mar. 4, 1918, Minutes, p. 28
[13] Four L Convention, Spokane, June 22, 1918, Minutes, p. 22.
[14] Four L Convention, Aug. 5, 1918, Minutes, pp. 9–13, 39–44; Four L Convention Aug. 12, 1918, Minutes, pp. 15–18.
[15] Washington State Bureau o. Labor, Biennial report, 1917–1918, p. 67 et seq.: U. S. Congress, House of Representatives, Committee on Expenditures of the War Department, Subcommittee on Aviation, Testimony, vol. 2, pp. 1182–1192 (66th Cong., 2d sess.); President's Mediation Commission, Report on the labor troubles in the lumber industry, in sixth annual report of the United States Secretary of Labor, pp. 21–23.
[16] West Coast Lumberman, Dec. 15, 1918, p. 20

organization.[17] On the other hand, the majority of the employers were positive in their convictions that the eight-hour day was an economic impossibility as long as other lumber regions, with which they were competing, had a longer day.[18]

At a meeting of employers, held in Portland on February 27, 1918, an attempt was made to reach an agreement on a uniform policy regarding the eight-hour day. A deadlock resulting, the meeting agreed to leave the settlement of the matter to Colonel Disque, who decided in favor of the eight-hour day. It required governmental authority, however, to secure a general observance of the shorter day. There were several companies who had to be compelled to observe it, and one company preferred to shut down for the duration of the war rather than to reduce the weekly hours from 50 to 48.[a]

Immediately following the granting of the eight-hour day, a convention of delegates representing the employee members of the Four L was held in Portland on March 4, 1918. At this convention a resolution was unanimously adopted expressing complete confidence in Colonel Disque and pledging the undivided support of the entire membership for any action which he might take.[19]

REGULATIONS AS TO WAGES AND LIVING CONDITIONS.

Living conditions in the camps had been a source of trouble only second in importance to the question of hours. In the fall of 1917 the I. W. W. had held a referendum among its members on the question of burning their blankets on May 1, 1918, and after that of refusing to work where bedding was not supplied. The vote was heavily in favor of the proposition. Standing by itself this threat probably would not have attracted much attention, but as a part of the general disturbance it had weight. Many of the members of the Four L still carried I. W. W. cards, and a considerable number actually burned their blankets on May 1.[20]

The wide differences prevailing in living conditions, wages, and the price and quality of board between the different camps and mills were causing a heavy labor turnover, entirely apart from the strike on the job. To remove these causes of turnover, Colonel Disque, acting on the authorization given him by the two Four L conventions, promulgated a number of regulations for the industry. In addition to establishing the eight-hour day, the more important of these regulations fixed a uniform wage for the industry, required that camps furnish all bedding, including linen, for the workers, and fixed the price of board at $7.35 per week and the bedding charge at $1 per week. The wage fixed was from 40 to 50 cents per hour for common labor in the mills and 5 cents higher in the camps, with other grades of labor in proportion.[21]

As was to have been expected, these regulations aroused considerable opposition in many quarters among both employees and

[17] Shingle Weaver, Sept. 8, 1917; Industrial Worker, Nov. 3, 1917, pp. 3, 4; Feb. 2, 1918, p. 6; U. S. Congress, House of Representatives, Committee on Expenditures of the War Department, Subcommittee on Aviation, Testimony, vol. 2, p. 1404 (66th Cong., 2d sess.).

[18] U. S. War Department, Division of Military Aeronautics; History of the Spruce Production Division; see p. 74

[19] Four L Convention, Mar. 4, 1918, Minutes, p. 20.

[20] Defense News Bulletin (I. W. W.), Nov. 24, 1917, p. 4; The I. W. W. Trial, by Harrison George, Chicago, 1918, p. 78 et seq.

[21] Four L Convention, Mar. 4, 1918, Minutes, p. 22; Four L Monthly Bulletin, March, 1918, p. 5 et seq.

[a] U. S. Congress. House of Representatives, Committee on Expenditures of the War Department, Subcommittee on Aviation. Testimony, vol. 2, p. 2279.

employers. No one expected the I. W. W. to approve such an arrangement, while the Timber Workers' Union resented it but little less.

DEVELOPMENT OF ORGANIZATION.

When the Four L was organized the West Coast was divided into seven districts, and a commissioned officer was detailed to each district to enroll the workers and establish a local in each mill and camp. By the close of the war these locals numbered 1,007. The only officer in a local was a secretary, appointed by the officer in charge of the district, who kept membership records, distributed literature sent out from headquarters, and kept headquarters informed of all changes of personnel on the job. A question box was placed at each local to receive any suggestions or complaints. These were all sent to headquarters and those which seemed to be material were investigated.[22] The first change in this simple system was at the Portland convention when the members were given some power over its action. This convention voted that the local secretary be elected by the local instead of being appointed.[23] Organization continued steadily all spring, and by April, 1918, there were 75,000 members on the West Coast.[24]

Because of the effect of labor conditions east of the Cascades on West Coast conditions, it was thought best to extend the Four L to the Inland Empire. At the request of the employers in that district organization there was undertaken during the spring, and by June 15 25,000 members had been enrolled. Two conventions were held in Spokane in June, one of employees on the 22d and one of employers on the 27th. Here Colonel Disque was given the same control of eastern conditions as four months earlier he had been given in the west.[25]

During the summer of 1918 several occurrences made desirable a more definite and complete organization of the Four L, among them being the increase in membership, there being in July 110,000 members in 980 locals,[26] the action of the Washington State Federation of Labor at its Aberdeen meeting on June 26, in attacking Colonel Disque and the Four L as enemies of labor, and the better feeling which had grown up between employers and employees as a result of their working together during the months preceding.[27]

At a meeting of the employers on July 19, called by Colonel Disque, resolutions were adopted indorsing the open shop, the eight-hour day, the method of conference for settling disputes, a permanent body of employers and employees to handle general questions, and the supreme control of Colonel Disque during the continuance of the war.[28] Shortly after this meeting Colonel Disque asked each Four L local to elect a committee of three members to confer with the employer on all local questions, and delegates to a general convention of employees to meet at Portland on August 5, 1918. This convention represented the West Coast only, which had

[22] Crumpacker, M. E., Report to the Four L Convention, Portland, Dec. 5, 1918, pp. 2, 6; also letter to O. P. Hoff, Oregon Commissioner of Labor, Sept. 5, 1918.
[23] Four L Convention, Mar. 4, 1918, Minutes, p. 18.
[24] Four L Monthly Bulletin, April, 1918, p. 7.
[25] Letter to O. P. Hoff, by M. E. Crumpacker, Sept. 5, 1918; Four L Conventions, Spokane, June 22, 27, 1918, Minutes, pp. 25, 31; Four L Monthly Bulletin, July, 1918, p. 12.
[26] West Coast Lumberman, Aug. 1, 1918, p. 34.
[27] Four L Convention, Portland, Oreg., Aug. 5, 1918, Minutes, pp. 7-9, 12, 13.
[28] West Coast Lumberman, Aug. 1, 1918, p. 22.

been redivided into eight districts by Colonel Disque.[29] The employee delegates in each district met and elected a district council of three members. Colonel Disque appointed three employers from each district to serve as the employer members of these councils. From among the members of these district councils an employer and an employee were selected as chairman, and also to serve as district representatives on the general council.[30] A week later a similar meeting for the eastern division was held at Spokane, and action taken similar to that in Portland. The eastern division was divided into four districts,[31] thus making 24 members on the general council.

PROVISIONS OF CONSTITUTION.

The general council met in Portland on August 19–21, and adopted a new wage scale, with a general advance of about 5 cents per hour for all types of labor. It also adopted a constitution for the organization. The constitution expressed the purpose thus:

> Its objects are to promote a closer relationship between the employer and the employee in the lumber industry of the Northwest; to standardize and coordinate working conditions; to improve the living environment in the camps and mills; to infuse a spirit of patriotism in the lumber workers during the present national crisis; to stimulate the production of lumber for war purposes and stamp out sedition and sabotage in the Pacific northwest.
>
> The Loyal Legion of Loggers and Lumbermen is not a labor union in the common acceptance of that term, but is purely a patriotic association of both operators and operatives engaged in this essential war industry. It has not and will not countenance the use of any of the facilities at its command for either the organization or disruption of legitimate labor unions, nor is it to be considered dual to or antagonistic toward any existing legitimate labor union.[32]

Article II provided that membership should be open to anyone engaged in the production of logs or lumber for war purposes, except enlisted men, on signing a pledge of loyalty. Provision was made to protect members from any discrimination by employers on account of Four L activities. Members were urged to wear their buttons at all times and to keep in close touch with the Four L. Article III provided that a local should consist of all the employees of a single company in a given locality, outlined the division into districts, previously mentioned, and provided for the holding of meetings. Business meetings could be called by headquarters or on a written request of 20 per cent of the enrolled members. None but members and Army officers were admitted to business meetings of the locals except upon a two-thirds vote of the members present.

Article IV dealt with officers and their duties. It provided that an Army officer should be in general charge of the Four L, with a subordinate in charge of each district, Colonel Disque to be in supreme control. Each local was to elect a local secretary, who was to act as the representative of the Government in the local, keep records,

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[29] These districts were as follows: District 1—Douglas, Coos, Lane, Linn, Benton, and Lincoln Counties, Oreg.; district 2—Marion, Clackamas, Yamhill, Polk, Washington, and Tillamook Counties, Oreg.; district 3—Clatsop, Columbia, Multonomah, and Hood River Counties, Oreg., and Skamania, Clarke, Cowlitz, Wahkiakum Counties, and the south end of Pacific County, Wash.; district 4—Most of Pacific and Lewis Counties, Wash.; district 5—Grays Harbor County, Wash.; district 6—Mason, Thurston, and Pierce Counties, and east end of Lewis County, Wash.; district 7—Clallam, Jefferson, Kitsap, and King Counties, Wash.; district 8—Snohomish, Skagit, and Whatsom Counties, Wash. First draft of constitution, map, and art. 3, sec. 2, manuscript; Four L Convention, Portland, Aug. 5, 1918, Minutes, pp. 19, 20.

[30] Four L Convention, Portland, Aug. 5, 1918, Minutes, pp. 21–23.

[31] These districts were: District 9—All of Washington east of the Cascades; district 10—Northern Idaho and western Montana; district 11—Eastern Oregon and southern Idaho; district 12—Central Oregon (the Bend country). Four L Convention, Aug. 12, 1918, Minutes, pp. 1, 5, et seq.

[32] Four L Constitution, art. 1, secs. 2, 3 The references to this constitution are to a mimeographed copy in the possession of M. E. Crumpacker, of Portland, Oreg.

and enroll members. He was to send each week to headquarters the names of all men entering or leaving the local and of all men who refused to join the Four L. Upon orders from headquarters he was to inspect the books of the company.

Article V, which provided for the various conference committees, was the heart of the whole plan. A conference committee of three members was to be elected in each local, the one receiving the highest vote to be chairman. This committee was to take up with the management all matters of local import and attempt to reach a settlement, such settlement to be final and binding. If a settlement could not be reached the matter was to be referred to the district council, then to the general council, and finally, if not sooner adjusted, to Colonel Disque, but no matter was to be referred to him until every effort had been made to settle it in conference. The chairman of the local was the accredited delegate from the local to all district and general conventions. The employee delegates, meeting in these conventions, elected the employee members of the district councils, the one receiving the highest vote to be chairman and by virtue of such position to be a member of the general council. The employer members of the district and general councils were appointed by Colonel Disque. When voting in councils each man was to have one vote, but delegates in conventions were to have one vote for each 50 members, or major fraction thereof, they represented.

Article VI provided for official wage bulletins to be published and distributed by the Four L. It also provided that an assessment should be levied from time to time to pay the expenses of the delegates and committee members.[33] Article VII provided for a monthly magazine to be issued by the Four L, the subscription price to be $1 per year. Article VIII provided the method of amendment and other routine matters.

At the next meeting of the general council in October, 1918, extensive alterations were made in the constitution. These changes were usually either a clarification of provisions whose intent had not been clear or a modification of those which had not proven entirely satisfactory. The only important alteration was in Article V, which was almost entirely rewritten. As revised it carefully distinguished between the jurisdiction of the three bodies—local committees, district councils, and the general council.

The local committee was given jurisdiction over matters of local concern, which were defined as "questions affecting the living, working, and recreation conditions of each local, unwarranted discharge of members, tool charges and breakages; and all local conditions surrounding the employment or affecting the obligation of the members of the Legion at that local, exclusive of questions of general import." Matters of general import were "those affecting the industry by districts or as a whole, such as wages and hours, general administration affairs, and all matters of relative value to other locals or members of the Loyal Legion." All questions of wages and hours were included in the latter class. The district board was to have final jurisdiction, where it could agree, on matters of local concern, except when it had not given a fair and impartial

[33] Previous to this the employers paid the expenses of their men when on Four L business. Four L Convention, Spokane, June 22, 1918, Minutes, p. 16.

hearing. Questions of general import could be decided only by the general council.[34]

ACCOMPLISHMENTS DURING FIRST YEAR.

Following the armistice the whole question of the method of handling industrial relations had to be recanvassed and an immediate decision reached as to the advisability of scrapping or continuing the Four L machinery thus gradually built up. Five days after the armistice a meeting of the West Coast Lumberman's Association was held in Portland and adopted the following resolutions:

Until there is a marked reduction in the cost of living we oppose any reduction in wages, even should lumber prices fall in value, and then not until after a conference with the Four L.

The Four L having demonstrated its value in time of war, we favor its continuance in time of peace as a means of conference and understanding between all engaged in the manufacture of logs and lumber, provided it agrees to the principle of the open shop.[35]

To ascertain the sentiment of the employees on this subject Colonel Disque called two conventions of the Four L, one in Portland on December 6 and one in Spokane on December 9, to decide as to the future policy of the organization. To these conventions Captain Crumpacker presented a report showing some of the more important accomplishments of the Four L during the little more than a year of its existence. About 120,000 men had joined the Four L, although more than one-third of these had later left the industry. The number of locals and membership of the Four L in December, 1918, by districts, was as follows:

	Locals.	Members.
District 1	108	6,485
District 2	46	3,665
District 3	115	10,376
District 4	80	7,001
District 5	103	8,299
District 6	99	7,808
District 7	90	9,362
District 8	98	10,785
District 9	115	4,462
District 10	112	7,250
District 11	33	2,820
District 12	8	1,278
Total	1,007	79,591
West Coast (districts 1–8)	739	63,781
East side (districts 9–12)	268	15,810

Captain Crumpacker referred to the establishment of the 8-hour day without decrease in pay, to increases in wages, and to improvement in living conditions. Such improvements included 150 new bunk houses, 100 new baths, and 600 other improvements. But more important than any of these he considered the new system of conference for the adjudication of difficulties. He summed up the gain of a year under the Four L thus:

The results to the Government are manifest. The labor turnover had been decreased from approximately 1,000 per cent to nearly 250 per cent. Production of the necessary airplane material was increased in round numbers from 1,500,000 feet per month to

[34] The changes are noted in Mr. Crumpacker's copy of the constitution.
[35] West Coast Lumberman, Dec. 1, 1918, p. 24.

22,000,000 feet per month at the time of the cessation of hostilities. Sedition and sabotage were generally stamped out throughout the Northwest. Strikes were eliminated and the men in the industry assumed a more benign attitude toward our established governmental institutions. They have been made better citizens and their responsibilities to the land of their birth or adoption have been brought home to them.

To the employee shorter hours were given, allowing more time for recreation and the like. Better wages and better living conditions resulted under this organization. Educational features and the opportunity to read good, wholesome literature was afforded them, and their thoughts and ideas were developed along good, sound, and substantial lines.

To the operator has resulted a closer relation to his men and a better understanding of their views in life, a great business asset. More contented individuals are on his pay rolls; and though this feature is only in the making, that idea lies open to greater development. Strikes and sabotage and violence have been set aside and the operator may consider at this time that his plant is generally safe from depredations that existed prior to the establishment of this organization. The development of the health and the personal hygiene of his men has been carried on without expense to himself and in general he is in a better position to-day as a result of the last year under the Loyal Legion to carry on more successfully his business.[36]

This picture is probably painted in somewhat too rosy colors and credits the Four L with things, such as the increase in wages, which would have come inevitably. It also paints conditions before the Four L was organized as too black. Yet on the whole a very large part of the credit for the harmonious adjustment of industrial relations in this industry during 1918 can be given to the Four L. During the first half of the year the industry was in about as bad a condition as any in the country, while during the last half it was in about as good shape as any. The difference was due largely to the Four L.

[36] Crumpacker, M. E.: Report to the Four L Convention, Portland, Dec. 6, 1918. Manuscript.

CHAPTER XI.—DEVELOPMENT OF LOYAL LEGION OF LOGGERS AND LUMBERMEN.

REORGANIZATION AFTER THE WAR.

The Four L conventions at Portland and Spokane on December 6 and 9, respectively, called by Colonel Disque, faced and settled the question of the future of the organization. At Portland, with about 400 employee delegates and 200 employers present, there were but 6 negative votes, all employee, on the question: "Shall the Four L continue?" At Spokane there was complete unanimity.[1] There were many members, however, who did not desire the Four L to continue into post-war periods, but the officers of the Four L estimated that the opposing votes in the referendum on the question held before the conventions were not over 20 per cent of the total vote cast. The president of the Timber Workers' Union claimed that this favorable showing was made by the use of open voting, by show of hands, with the employers present,[2] and the president of the Washington State Federation of Labor stated that the two conventions were dominated by Colonel Disque and the employers, so that the employees of the industry had no opportunity to make their desires effective.[3] As far as can be learned the action taken at these conventions and in the locals was not far from the expression of the will of the majority of the members of the Four L.

These conventions elected a new general council, or board of directors as it has since been called. This board met, according to the instructions of the convention, on January 14, 1919, adopted a new constitution, and conducted other necessary business. The most important of the other actions of the board at this time was the establishment of several employment bureaus and the appointment of the employee members of the board as organizers.[4]

GENERAL PRINCIPLES OF ORGANIZATION.

The general principles upon which the Four L was founded were expressed in the constitution thus:

> That those directly concerned in any industry are in a better position to solve its problems than disinterested parties.
>
> That maximum results can not be obtained in any industry without due consideration being given to all parties contributing to its development.
>
> That the great economic loss caused through labor turnover, strikes, lockouts, and walkouts is unnecessary and can be avoided.
>
> That if prosperity in any industry is to be attained, mutual distrust must be replaced by mutual understanding and cooperation.[5]

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[1] Oregonian, Portland, Oreg., Dec. 7, 1918, p. 1; Telegram, Portland, Oreg., Dec. 7, 1918, p. 2; Four L Monthly Bulletin, Dec., 1918.
[2] Four L Monthly Bulletin, Dec., 1918; Timber Worker, Dec. 14, 1918.
[3] Washington State Federation of Labor. Proceedings of eighteenth annual convention, 1919, p. 18.
[4] Four L Bulletin, March, 1919, pp. 3, 6-8, 16-17.
[5] Constitution and by-laws, preamble, pars. 2-5.

The objects which the Four L sought to accomplish were:

To provide an organization on the basic principle of the "square deal" in which both employer and employee are eligible for membership and meet on common ground.

To insure to the workman a just and equitable wage, and to the employer a maximum degree of efficiency.

To maintain the basic eight-hour day.

To standardize working and living conditions in camps and mills.

To create a community spirit in the promotion of matters pertaining to public welfare in each locality.

To encourage, when and where it is found feasible, cooperative hospitals for the care of the sick and injured, and medical attention to the families of members.

To provide for its members when feasible, accident, health, and other insurance.

To cooperate with the legislative bodies of the various States for the improvement of laws relative to accident insurance and the prevention of accidents.

To institute and maintain, when feasible, employment service.

To further recreational and educational facilities in the camps and mills.

To provide means for an amicable settlement, on an equitable basis, of all differences that may arise between employer and employee.

To promote a closer personal relationship and the spirit of loyalty between the employers, their representatives, and the employees.

To provide methods of informing its members upon all questions of trade interest to operators and workmen.

To favor the development of logged-over lands for actual settlers, upon a reasonable system of payments.

To develop to the highest degree possible, loyalty to the United States, its laws and Government, and to promote and demand proper respect for its flag.[6]

JURISDICTION AND MEMBERSHIP.

The Four L jurisdiction was originally defined as the States of Oregon, Washington, Idaho, and the timbered districts of Montana, but this was later, November, 1920, extended to include the whole United States. As yet, however, no attempt has been made to organize outside of its original field.[7] The constitution provided that any owner or employee in the lumber industry or allied industries should be eligible to membership, provided he had taken out his first citizenship papers, had not evaded the draft, and was not a member of any organization whose precepts were not in accord with the Government of the United States.[8] Members were required to sign the following pledge:

I, the undersigned, firmly convinced that the best interests of both employer and employee in the lumber industry are conserved by the principles set forth in the constitution and by-laws of the Loyal Legion of Loggers and Lumbermen; and that the great principles of democracy upon which the United States was established and upon which it must continue, are based upon the mutual cooperation which is the foundation of the Loyal Legion of Loggers and Lumbermen; do solemnly promise and vow that I will, to the utmost of my ability, seek to promote a closer relationship between the employers and employees of the industry; to standardize and coordinate working conditions; to improve the living environment in camps and mills; to promote the spirit of cooperation and mutual helpfulness among the workers and operators, as a patriotic endeavor looking toward the welfare of all; to build up the efficiency of the industry for the prosperity of every individual connected therewith; and to stamp out anarchy and sabotage wherever I may find it.[9]

The initiation fee was placed at $1 and the dues at 25 cents per month, not including dues collected for the use of the local, while the employer was required to match the dues paid by his crew, with the proviso that this should not be less than the equivalent of that for

[6] Constitution, Art. I, sec. 2.
[7] Constitution, Art. I, sec. 3: Four L Bulletin, December, 1920, p. 50.
[8] Constitution, Art. II, sec. 1.
[9] Idem, sec. 2.

50 per cent of his crew. At the November, 1920, meeting the board of directors, acting on the authorization of a referendum of the membership, raised the dues to 35 cents per month.[10]

FORM OF ORGANIZATION.

The general form of organization in effect during the war was maintained, with slight modifications. The new constitution provided that each local should have a chairman, vice chairman, secretary and treasurer, and a conference committee consisting of the chairman, vice chairman, and one other member. The district boards were enlarged to eight members, to provide for equal representation for the sawmill and logging ends of the industry as well as for employers and employees. The general officers provided for were a president, an executive secretary, a treasurer, and an editor of the Four L Bulletin. These were elected by the board.[11] General Disque was retained as president. The Four L employs a number of field officers to look after the interests of the members, organize new locals, solicit subscriptions for the Four L Bulletin, assist locals, and in all possible ways promote the objects of the Four L. There are also employment offices at Portland, Spokane, Aberdeen, Tacoma, and Seattle.[12]

MISCELLANEOUS PROVISIONS OF NEW CONSTITUTION.

The manner of adjusting differences was slightly modified. The new constitution reaffirmed practically all that was in the old, but added one significant provision concerning the conference committee:

> This committee shall be strictly an employees' committee, not including foremen or superintendents, and shall at all times act as the spokesman for the men concerned, rather than as an arbitration board.[13]

The other chief provisions are that the employer members of the district boards shall be elected by the employers at the district conventions, while in case of a tie in the board of directors when all members are present and voting, the president is permitted to cast the deciding vote, but any decision so reached is subject to arbitration in a prescribed manner.[14]

As a guaranty for the observance of regulations by the employer, he was required to post a bond in an amount equal to $2.50 per employee, with a minimum of $100, and in case of failure or refusal to obey any regulation of the board of directors the employer was subject to a fine in addition to the forfeiture of the bond. In November, 1922, the board of directors abolished the requirement of a bond.[15] Employers were further required to give 30 days' notice of contemplated withdrawal from the Four L.

FOUR L BULLETIN.

At the time of reorganization the Four L took over the Four L Monthly Bulletin, which had been published by the Spruce Production Division in the interests of the Four L, changed the name to

[10] Constitution, Art. III, sec. 1; Four L Bulletin, December, 1920, p. 12.
[11] Constitution, Arts. IV, V, VI.
[12] Constitution, Art. V, sec. 10; Four L Bulletin, March, 1923, p. 7.
[13] Constitution, Art. IV, sec. 4.
[14] Idem, Art. V, secs. 1, 6.
[15] Constitution, Art. VIII, sec. 2; Four L Bulletin, December, 1922, p. 8.

Four L Bulletin, increased the subscription to $1.50 per year, and elected a new editor and staff. The Lumberjack, of Seattle, was purchased and combined with the Four L Bulletin. The magazine was extremely prosperous and reached a circulation of 14,000 by March, 1920. The circulation fell off materially during the depression of 1920–21, but has been growing again during the past year or more. In October, 1922, it totaled 5,648 copies.[16]

EXTENSION OF ORGANIZATION.

Following the reorganization in January, 1919, the Four L began a vigorous recruiting campaign in an attempt to line up all of the employers and employees in the Northwest. The employee members of the board of directors went into the field as organizers. By the end of February the president reported that in six weeks 17,000 members had been organized into 281 locals.[17]

OPPOSITION TO ORGANIZATION.

The reorganized Four L inherited a great deal of opposition from the I. W. W., the Timber Workers' Union, and those employers who were not in sympathy with the war-time Four L control. While the I. W. W. has presented the most effective organized opposition the Four L has had to meet, the Timber Workers Union has been the loudest in its opposition. While, until recently, the I. W. W. has not devoted much time to condemning the Four L, it has been the prevalent I. W. W. sentiment in the logging camps which has made Four L organization there a precarious thing. Few camps now have Four L locals. The constitutional bar to membership against members of organizations whose precepts are not in accord with the Constitution of the United States is clearly aimed at the I. W. W.[18] Recently the Four L has been putting considerable vigor into its attempts to organize locals in the logging camps, and the I. W. W. is devoting considerable attention to the Four L.[19]

The Timber Workers' Union carried on a constant campaign of denunciation of the Four L. During the war the opposition was guarded, but with the close of governmental control it became more open. During 1919 and the first part of 1920 the union spent considerable time in attacks upon the Four L, but since the summer of 1920 its attacks have almost ceased.[20]

While many of the employers were convinced that the Four L contained great possibilities for good and wholeheartedly supported it, others would have nothing to do with it. Their opposition rested chiefly on three grounds: Opposition to the principle of collective bargaining, opposition to a minimum wage, and a desire to lengthen the working day and break down the standards of working and living conditions. The Four L fights the unfair employer as vigorously as it does the unfair employee. For example, in May, 1922, the Four L Bulletin contained a most scathing condemnation of a large lumber company because of its policy of paying low wages and working long

[16] Four L Bulletin, April, 1919, p. 1; May, 1919, p. 9; April, 1920, p. 25; October, 1922, p. 5.
[17] Idem, March, 1919, pp. 3–5.
[18] Four L Bulletin, December, 1919, p. 11; Const., Art. II, sec. 1c.
[19] Four L Bulletin, December, 1922, pp. 9, 41; Industrial Worker, February–March, 1923.
[20] Timber Worker, issues during 1918, 1919, and 1920; Seattle Union Record, issues during 1918 to 1922.

hours.[21] In general, however, the employers supported the Four L. This was regarded as additional proof by the I. W. W. and the Timber Workers that the organization was boss controlled.

During the year 1919 33,948 members joined the Four L, while the average membership during the year was 16,703. During 1920 the number of new members was 10,572, and the average membership was 17,733 during the first half of the year and 13,708 during the second half. During the first half of 1921 2,241 men joined, and the average membership was 8,777. Since that time the only report of members published was that during the first quarter of 1922 there were 10,372 members, and indications are that the membership is about the same to-day (March, 1923).[22] In December, 1921, the Four L was organized in about one-third of the mills of the Northwest, but these mills cut about one-half of the lumber produced in the district. Two years earlier 70 per cent of the lumber was cut in Four L mills. The Four L was very weak in the camps, and there were few locals there.[23]

LADIES' LOYAL LEGION.

Early in 1919 the mothers, wives, and daughters of the Four L members in the Inland Empire began organizing a Ladies' Loyal Legion as an auxiliary of the Four L. It quickly spread over much of the Inland Empire and was then adopted by the board of directors as a part of the Four L organization in November, 1919. After this action the Three L, as it was called, spread over a large part of the Four L territory, where it had considerable success. It lost strength along with the Four L and has not become so important since. However, it is doing good work in some localities, particularly in developing the social and benevolent activities of the members and in Americanization work.[24]

DETERMINATION OF MINIMUM WAGE.

One of the duties of the Four L board of directors has been the determination of the minimum wage for the Four L mills and camps. There was little trouble as long as wages were rising, but when depression struck the industry in the summer of 1920 it became an entirely different story. At the peak, in the spring of 1921, unemployment was probably about 50 per cent. When the Four L was reorganized early in 1919 the war-time wages were still in effect. These rates provided for a minimum of 40 cents per hour for mill labor and 45 cents in camps, with a maximum for unskilled labor 10 cents per hour higher, and most companies were paying the maximum. During the spring of 1919 there was a general cut of from 5 to 10 cents per hour. The Four L board immediately removed the maximum limit, and on July 1 raised the minimum on the West Coast 5 cents per hour and the minimum in the Inland Empire to 47½ cents per hour. On August 1 the minimum for both camps and mills on the West Coast was made 50 cents. Six months later the

[21] Four L Bulletin, May, 1922, p. 16.
[22] Data for membership and new members were computed from the reports of the treasurer published in the Four L Bulletin for March, 1920, pp. 33–38; September, 1920, pp. 42–47; March, 1921, pp. 34–37; August, 1921, pp. 26–28; March, 1922, p. 34; August, 1922, p. 2; February, 1923, p. 17; Interview with E. N. Wightman, treasurer of the Four L, May, 1922.
[23] Interview with N. F. Coleman, president of the Four L, December, 1921.
[24] Four L Bulletin, August, 1919, p. 12; September, 1919, p. 12; December, 1919, p. 50.

minimum was raised 5 cents all around, making it 55 cents in the west and 52½ cents in the east. January 1, 1921, there was a general cut of 10 cents per hour, and on June 1, 1921, there was a further cut to 37½ cents per hour for all companies in the Northwest. At the November, 1923, meeting of the board of directors of the Four L, the minimum was raised 5 cents per hour, to become effective January 1, 1924.[25]

The going wage, as distinct from the minimum wage, varies widely from district to district and even from company to company. A survey of wage conditions on Grays Harbor in April, 1921, showed a Four L operation which was paying $4.25 for an eight-hour day, while within street-car distance of it was another large plant paying $2.50 for 10 hours. The common level was about $3.60 for eight hours, and within 50 miles the usual level was $2.60 for eight hours. The Four L minimum at this time was $3.60.[26] During normal times the going wage is considerably above the Four L minimum, and it is only in times of depression that the two tend to coincide. The method which is rapidly gaining ground within the Four L is to have a wage board in each district. This board determines the going wage for the district but has no power to secure the observance of its awards. Nevertheless these awards are pretty generally obeyed. Probably the first wage board of this kind was established on Grays Harbor in August, 1919, at the district Four L convention. It immediately met and fixed a going or hiring wage of $4.75 per day for the region, 75 cents per day above the Four L minimum.[27] Wage boards were established in several districts, which adjusted wages to market conditions. On November 23, 1920, the Coos Bay board reduced the going wage from $5.30 to $4.80. This was about six weeks before the Four L minimum was reduced from $4.40 to $3.60.[28] The going wage has usually kept above the minimum, although from about December, 1920, to June, 1922, the difference between them was small.

By December, 1920, the market was in such bad shape that about half of the industry was shut down, and there was little prospect of an early improvement. Most of the Four L mills and camps had reduced wages to or nearly to the minimum, and some mills, not all of them non-Four L, had gone below the minimum. The bond of one lumber company was forfeited and the company expelled by the board of directors because it cut wages below the minimum, while another lumber company agreed to restore the old wage and pay the men the difference for the few days in which a wage below the minimum had been paid. In some cases wages were as low as $3.60 in non-Four L mills.[29] In view of these conditions the minimum seemed to need attention, and a special meeting of the board of directors was held in December to consider it. A flat cut of 10 cents per hour for all employees was made in the minimum. Most of the employee members of the board agreed that such a cut in the minimum was necessary to hold the organization together, although there was some who held out for the old scale.[30] Subsequent events proved the

[25] Telegram, Portland, Oreg., Mar. 5, 1919, p. 4; Four L Bulletin, June, 1919, p. 21; July, 1919, p. 4; February, 1920, p. 15; January, 1921, p. 3; June, 1921, pp. 8, 22; December, 1922, p. 39; December, 1923, p. 10.
[26] Four L Bulletin, May, 1921, p. 8.
[27] Idem, August, 1919, p. 27.
[28] Idem, December, 1920, p. 14.
[29] Idem, December, 1920, pp. 15, 29.
[30] Idem, January, 1921, p. 3 et seq.; June, 1921, p. 22.

wisdom of this action, but the I. W. W. and the Timber Workers' Union made it the occasion for a great deal of denunciation of the Four L.

By the 1st of March, 1921, the demand for a further cut in the minimum was very strong, and another special meeting of the board was held to consider the matter. All members of the board were agreed that it was impossible for the industry to pay such wages and not lose money, but the responsibility of the employers to their men and the community was emphasized. The employee members of the board were unanimous in opposing a reduction, just as the employer members had been unanimous in favoring the cut in December. These two cases are the only times on record when either group has been a unit on any proposition, except in those cases where the opposition has been negligible. The minimum held, although there were one or two employers who refused to make the vote unanimous.[1] By May the situation was more acute. Since the March meeting 18 employers had given notice of withdrawal from the Four L. A survey of wages in mills and camps showed that the going wage in non-Four L plants was about $1 per day below the Four L minimum, with few non-Four L employers paying as high as the minimum. In view of this condition the board reduced the minimum to $3 per day, or 37½ cents per hour for the whole Four L territory, the figure at which it now (March, 1923) stands.[32] There was, therefore, a total reduction in the minimum of 31.8 per cent. The decrease in the cost of living from June, 1920, to May, 1921, in Portland, Oreg., was 19.1 per cent and in Seattle 14.4 per cent.[33] On the other hand, the decrease in the price of lumber from June, 1920, to May, 1921, was, for No. 1 common boards, 61 per cent and for No. 2 or better drop siding 58.8 per cent.[a]

It was said by the president that these compromises concerning wages caused a loss of scores of employers and thousands of employees; some thought wages fell too slowly, others that the fall was too rapid.[34] On the whole, the Four L put a decided brake on the downward movement of wages at a time when nothing could have completely checked it. During the year and a half following the summer of 1920 many of the companies were financially unable to continue to pay the wages prevailing during 1920. In December, 1920, the 43 companies which reported to the West Coast Lumberman's Association reported a loss of $46.65 per thousand feet on their production for the month, or, deducting losses due to depreciation of inventories, a net loss of $10.22 per thousand feet for the month. During 1921 70 companies reported to the association an average loss of $1.31 per thousand feet on their total production, or, deducting inventory losses, $1.26 per thousand feet.[35] These companies are above the average financially.

It was not until the spring of 1922 that the industry recovered to the point where another wage increase was possible. In May, 1922, the board of directors refused to raise the minimum, as it was the general opinion that the board should not set the going wage, and an increase in the minimum would have that effect, since few

[1] Four L Bulletin, March, 1921, p. 16; April, p. 3 et seq., 32; June, 1921, p. 22.
[32] Idem, May, 1921, pp. 5, 8; June, 1921, p. 11.
[33] U. S. Bureau of Labor Statistics. Monthly Labor Review, July, 1921, p. 105.
[34] Coleman, N. F., president of the Four L: Interview, December, 1921.
[35] West Coast Lumberman's Association. Analysis of Douglas Fir Costs and Sales Returns, 1920, 1921
[a] See Table 8a.

companies were paying above the minimum.[36] Shortly after the meeting wage boards met in several of the Four L districts and advanced the going wage to about $3.40 for most districts.[37] Another advance of about the same amount was made in the same manner in February, 1923, bringing the going wage for most of the Four L region to an average of about $3.80 per day.[38]

EXTENT OF ADOPTION OF EIGHT-HOUR DAY.

In striking contrast to the difficulty in maintaining a living wage for the lumber workers, there has been but little opposition to the eight-hour day. A few employers have lengthened the workday to nine or ten hours, but such cases have been few. In April, 1922, less than 3 per cent of the mills and camps in the Four L territory were operating more than eight hours—24 out of a total of 819. Of the long-day plants there were 7 out of a total of 506 in west Washington and 8 out of a total of 228 in western Oregon, while the Inland Empire had 9 out of a total of 85.[39] At present (March, 1923) there are still fewer long-day plants in this region. Outside of Four L territory, to the north, east, and south, the longer day is general. At Klamath Falls, Oreg., and in the Klamath Valley in northern California, just outside of the Four L territory, the mills and camps abandoned the eight-hour day on March 1, 1922. This resulted in a general strike in that region which was finally lost after several months of struggle. Although the Timber Workers' Union led the strike, many members of the Four L sent funds to assist in the struggle. In November many of these plants restored the eight-hour day.[40] However, there is scarcely another non-Four L district in the country where the eight-hour day prevails.

The Four L is seeking a national 8-hour day in the lumber industry on the ground that competition with lumber from 10-hour mills and camps is the most serious obstacle to the 8-hour day in this region. In May, 1922, the board of directors by a very close vote went on record in favor of a legal 8-hour day in hazardous occupations in the Northwest, provided that it should become effective in all three States at the same time.[41]

As a matter of tactics, the chief danger to the 8-hour day is the practice of working overtime at straight time. This is, of course, only another name for a longer day, temporarily or permanently. For example, at a plant in California the men worked 10 hours at straight time for two months before the 10-hour day was established.[42] At the May, 1922, board meeting the fear was generally expressed that to permit working overtime at straight time, no matter what the emergency, would seriously undermine the 8-hour day. The board voted unanimously to refuse to permit, under any circumstances, any plant to continue production for more than 48 hours in any one week at straight time. However, repair work necessary to continuous production might be done at straight time for more than eight hours per day, provided the employees were willing.[43]

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[36] Four L Bulletin, June, 1922, p. 44.
[37] Idem, July, 1922, p. 14.
[38] Idem, March, 1923, p. 13.
[39] Idem, May, 1922, p. 12.
[40] Idem, April, 1922, p. 6 et seq; May, 1922, p. 12; June, 1922, pp. 12, 20; July, 1922, p. 20; January, 1923, p. 18.
[41] Minutes of the board of directors' meeting of the Four L, May, 1922, p. 5.
[42] Four L Bulletin, April, 1922, p. 14.
[43] Minutes of the board of directors' meeting of the Four L, May, 1922, p. 7.

The regulations governing overtime are stated as follows:

2. The entire industry, logging camps and lumber mills, will continue on the basic eight-hour day principle, and time and one-half will be paid for overtime, except as hereinafter provided.

12. Men marked by an asterisk (*) [in the table of minimum rates in paragraph 10] must be considered as daily employees, who are not entitled to extra pay for work in excess of eight hours which is ordinarily performed to insure the continued operation of the plant. Their pay contemplates such services, and no extra pay will be allowed. (It must be understood that men operating machines must tune them up before or after the eight hour day, such work not being overtime.) Anyone engaged in overtime work outside of his regular job shall receive time and one-half.

13. Men engaged in making emergency repairs, teamsters, chauffeurs, transportation men, loaders, graders, and tallymen, when required for work necessary for the continued eight hours' production of the product, shall receive straight time for such period worked in excess of eight hours. Emergency repairs are defined as those that can not be done safely and practicably when the mill is in operation. This will not apply to new construction or work done during a shutdown during general overhauling. In case of disputes as to what constitutes an emergency the action of the district board, full membership being present or by mail vote, will be final.

Men shall not be required to engage in overtime work carrying straight time except by mutual agreement, and in the event they do not care to work this overtime at straight time no effort shall be made by the employer to discriminate against such employees refusing to work the overtime. This applies only to emergency and other work in excess of eight hours provided for in this bulletin, and not to any part of the operation engaged in production." [a]

ATTITUDE AS TO INCREASED EFFICIENCY.

The Four L is not opposed to increased efficiency when it is not purchased at the cost of too great strain. It is founded upon the idea of mutuality of interests between the employer and employee—that there are large fields in which their interests are identical. One of these fields is production. Both are interested in maximum production at minimum cost. The prosperity of the industry depends on its ability to sell its product in competition with other lumber regions and other kinds of building materials, and the lower the costs the wider the market for lumber. The Four L has consistently opposed any tendency among its members to "soldier" or "beat the whistle." It maintains that the employer can not permanently pay for that which he does not receive, and that the good of the industry transcends any temporary individual benefit. Two examples of how the Four L increases efficiency may be cited.

During the early part of 1919 the sharp drop in lumber prices caused a loss to a lumber company in Tacoma of over $3 per thousand on their cut of about 10,000,000 feet per month. The rate of loss was 13.7 per cent in January and 24.4 per cent in February. The company then decided to cut wages 10 per cent, but the Four L made a counterproposition of an attempt on its part to increase production. The offer was accepted by the company, although it had lost thousands of dollars in 1917 on an efficiency system which had to be abandoned. In March, with lumber prices slightly higher than in February, the loss was cut to 9 per cent and in April there was a profit, although the April prices were 66 cents per thousand lower than in March and $1.15 per thousand lower than in January.[44] The other example is taken from the experience of a lumber company in Raymond in 1921–22. On the initiative of the conference committee an efficiency board was organized. It began

[a] Four L Wage Bulletin, No. 1, June 1, 1921.

[44] Four L Bulletin, June, 1919, p. 3 et seq.

a study of the whole plant and made such recommendations as in the opinion of the employees would increase the efficiency of the plant. The improvements recommended and installed ranged all the way from a separate engine for the edger, costing $1,000, to replacing a broken plank in the dock. The result was a substantial reduction in costs.[45]

ADJUSTMENT OF DIFFERENCES.

The distinctive feature of the Four L is the plan of conference between employers and employees concerning all differences which may arise between them. The machinery of conference has been described previously,[46] but something must be said concerning the manner and spirit in which the machinery is used. The general idea of the organization is that the conference committee should meet with the employer at frequent intervals, whether or not there are grievances to be adjusted, and that the employer should regularly attend the meetings of the local. At the November, 1919, meeting of the board of directors a resolution was adopted urging the employer to meet regularly with his local, and at the May, 1922, meeting the president stated that it was impossible for the employees to build up an active local without the hearty cooperation of the employer.[47] Employers have seldom withdrawn when the local has been active, and locals have not been able to maintain an existence long after the employers withdrew.[48]

There is growing up among Four L members, both employer and employee, the feeling that it is not fair to attempt to "put anything over" on the other, but that in all cases the machinery of conference should be used. In one instance a crew is reported to have refused an increase in wages because it was "given" by the employer rather than decided upon in conference.[49] Some of the employers are coming to refuse any request of a member of the crew which is not presented through the conference committee.

At first there was a feeling that only important matters, such as questions of wages, hours, working conditions, discrimination, and so on, should be brought before the conference committees, but there has grown up a feeling that matters of misunderstanding or disagreement, both great and small, should come before the committee. Nothing is too important, nothing too trivial, for adjustment through conference. While it is impossible to state definitely what proportion of cases coming before the committee are not satisfactorily adjusted but must be appealed, since many of the matters are handled informally and never become matters of record, there is a general feeling that comparatively few cases have to be appealed to the district boards. The number of cases which are carried to the board of directors is almost negligible, a half dozen or less per year, and no case has yet arisen in which the president has been called upon to cast the deciding vote, while arbitration is still farther distant.

ACTIVITIES AND ACHIEVEMENTS.

The Four L has attempted several other lines of endeavor to benefit the members. Chief of these are the attempt to improve

[45] Four L Bulletin, June, 1922, p. 18.
[46] See pp. 83 and 88.
[47] Four L Bulletin, December, 1919, p. 11.
[48] Idem, January, 1921, p. 5; May, 1921, p. 18.
[49] Survey, May 1, 1920, p. 169. "The 4Ls in Lumber," by R. S. Gill.

living conditions in the camps, the maintenance of employment offices, and insurance and social activities. During 1919 and 1920 considerable improvement was made in living conditions in the camps, a continuance of the work begun during the war, but since 1920 most of the loggers have left the Four L and little has been done along these lines. Employment offices are now maintained at Portland, Spokane, Aberdeen, Tacoma, and Seattle. No fees are charged, but men who are placed through them are expected to join the Four L. During April, 1922, the four offices then open placed 632 men. This is not a large number, but probably is a considerable proportion of the men hired from employment offices by Four L employers.[50] In 1920 plans for accident insurance were prepared by the Four L, but the depression prevented them from being put into operation. They have lain dormant for over two years, but recently it was decided to employ an insurance expert to put them into effect.[51] The Four L maintains social halls in many places and has frequent social gatherings, thus having many of the functions of a fraternal organization, and this tends very greatly to strengthen its hold upon its members.

The Four L has to its credit some substantial achievements. Chief of these is the preservation of the eight-hour day, due mainly to its support. It has steadied the market and kept wages higher than they otherwise would have been. The extent of this influence is, of course, hard to determine, but Four L wages have usually been higher than wages in non-Four L plants. Another achievement—and in many ways the most important—has been the adjustment of matters of dispute or possible friction through conference. This has permitted employer and employee to work together peaceably instead of continually struggling and fighting with each other. There is a decided contrast between the uniform harmony in Four L industrial relations and the numerous clashes and small strikes which prevail in plants where the Four L is not organized.

But not all members of the Four L have lived up to its platform. At nearly every board of directors meeting during the period of industrial depression in 1920 to 1922 it was necessary to fine and expel employer members for violation of rules, while for many violations less drastic action was taken. That such action has not always been one-sided is shown by the action of the board of one district. It fined 18 workmen who had "walked off the job" at a mill at Bellingham $5 each because they left their jobs at noon without using the Four L machinery to secure permission.[52] There have been some cases where the employer has discriminated against men who were active in Four L work, but the president stated that not over a half dozen such cases had come to his attention in two years.[53]

General Disque resigned in June, 1919, and in November, 1919, Prof. Norman F. Coleman, of Reed College, was elected by the board to succeed him. President Coleman assumed office on February 1, 1920. On November 22, 1919, the Four L was incorporated under the laws of Oregon as a nonprofit-making organization.[54]

[50] Rueguitz, W. C., executive secretary of the Four L: Interview, May, 1922.
[51] Four L Bulletin, June, 1922, p. 9; December, 1922, p. 38.
[52] Idem, February, 1923, p. 18.
[53] Coleman, N. F., president of the Four L: Interview, December, 1921.
[54] Four L Bulletin, December, 1919, p. 11 et seq., 51.

CHAPTER XII.—THE RIVALS OF THE LOYAL LEGION OF LOGGERS AND LUMBERMEN.

The great strength of the Four L in 1918 and the years following crowded all other attempts to reach a solution of industrial relations problems into the background, and these have had a minor significance since that time. Of these other attempts the more important are the International Union of Timber Workers, the I. W. W., the shop-committee plan, and cooperation. None of these have affected much of the industry; all of them are perhaps of most significance as rivals of the Four L.

AMALGAMATION OF SHINGLE WEAVERS AND TIMBER WORKERS' UNIONS.

When the mills and camps resumed operations in the fall of 1917, at the close of the strike, neither the Shingle Weavers' nor the Timber Workers' Union called the strike off, although both organizations permitted most of their members to return to work. The strike experiences had convinced the members of both unions that they could work together. Accordingly, on November 11, 1917, the Timber Workers held a special convention at Tacoma, which referred to the membership the question of amalgamation with the Shingle Weavers, and on December 3 the executive board of the Shingle Weavers' Union took similar action. Both unions voted to unite. A joint convention of the two unions was held at Seattle on March 3, 1918, at which amalgamation was effected. The new union took the name of the former, the International Union of Timber Workers. The constitution of the old Timber Workers' Union of 1914 [1] was revived, with slight changes to adapt it to the new conditions which had arisen. The distinctive feature of this constitution was the provision for three departments, one each for sawmill workers, loggers, and shingle weavers. At this convention the strike was called off except for plants which did not grant the 8-hour day, and an attempt was made to seek closer relations with the West Coast Lumberman's Association in a fight on the I. W. W. Sixteen locals of Timber Workers were represented by 31 delegates, while 24 delegates represented 12 Shingle Weavers locals. The membership of the Shingle Weavers at this time was 206 and of the Timber Workers 2,324. The last page of the Seattle Union Record was continued as the official journal, but the name was changed to the Timber Worker.[2]

GROWTH OF NEW TIMBER WORKERS' UNION.

During the first year, March 1, 1918, to February 28, 1919, the Timber Workers were not able to accomplish much in the Northwest on account of the strength of the Four L. Leaders of the Timber

[1] See supra, p. 58.
[2] Shingle Weaver, Jan. 8, 1918: Proceedings of the joint convention of the International Shingle Weavers' Union of America and the International Union of Timber Workers, Mar. 3, 1918; American Federation of Labor, Proceedings of the thirty-eighth annual convention, 1918, p. 22.

Workers complained that officers of the Spruce Production Division, from Colonel Disque down, opposed their organization in every possible way and made it almost impossible for them to secure new members.[3] During the year the union issued 55 charters, and revoked 6, leaving 74 in effect at the close of the year. The only data for membership figures for the union are the per capita tax paid by the locals to the international, which in most cases was 50 cents per member per month; the per capita paid by the international to the American Federation of Labor, which was seven-eighths cent per member per month; and the votes in the conventions of the American Federation of Labor, which were based on each 100 members or major fraction thereof in the international. These various types of data agree that the membership during this year averaged about 2,500. The year ending February 29, 1920, was more favorable for the Timber Workers than the preceding one, particularly outside of Four L territory; in this year 101 charters were issued and 10 canceled.

The average strength during 1918 and 1919 is shown in Table 16, which reports the number of locals, amount of per capita tax paid to the international by locals, and estimated membership by districts.

TABLE 16.—NUMBER OF LOCALS, TOTAL PER CAPITA TAX PAID TO THE INTERNATIONAL BY LOCALS, AND ESTIMATED MEMBERSHIP OF THE INTERNATIONAL UNION OF TIMBER WORKERS, 1918 AND 1919, BY DISTRICTS.[1]

District.	Number of locals.		Total per capita tax.		Estimated membership.	
	1918	1919	1918	1919	1918	1919
West Coast	30	42	$6,882.68	$11,539.00	1,147	1,923
Inland Empire	22	15	4,416.15	3,698.50	736	616
Lake States	15	59	2,807.25	26,087.45	468	4,348
South	12	49	581.70	4,371.48	97	729
California	1	6	226.75	3,708.50	38	618
At large	.....	.....	70.10	44.00	12	7
Total	80	171	14,984.63	49,448.93	2,498	8,241

[1] International Union of Timber Workers. Proceedings of 1919 convention, pp. 45–51; 1920 convention, pp. 57–70.

The per capita tax paid to the American Federation of Labor in 1918 was $238.69, representing an average membership of 2,273. The Federation granted it 23 votes, representing 2,300 members. In 1919 it was entitled to 32 votes.[4]

Table 17 shows, on the basis of the per capita tax paid to the American Federation of Labor, the growth of the union from month to month during the year ending February, 1920. The increase in rate of per capita tax from seven-eighths to 1 cent per month per member came during the year; just when is not clear.

[3] Timber Worker's Union, Proceedings of 1919 convention, pp. 26–30; see supra, pp. 78 and 79.
[4] Idem, pp. 45–51; American Federation of Labor, Proceedings of fortieth annual convention, 1920, p. 38.

TABLE 17.—TOTAL PER CAPITA TAX PAID BY THE INTERNATIONAL UNION OF TIMBER WORKERS TO THE AMERICAN FEDERATION OF LABOR AND ESTIMATED MEMBERSHIP, 1919-20, BY MONTHS.

Month.	Total per capita tax.	Estimated membership.
1919:		
March	$35.36	4,041
April	35.36	4,041
May	37.69	4,307
June	40.15	4,589
July	40.15	4,589
August	58.14	6,645
September	79.95	9,139
October	133.73	15,283
November	113.04	12,919
December	123.35	[1] 12,335
1920:		
January	119.65	[1] 11,965
February	89.77	[1] 8,977
Total	906.34	98,830
Average		8,236

[1] It is probable that the 1 cent tax became effective in December, following the convention in November, 1919.

The American Federation of Labor granted the Timber Workers 101 votes in the 1920 convention, but during the first half of 1920 the membership was larger than in 1919.[5]

The controversy with the Four L continued throughout the year 1919. It is impossible to reconcile the conflicting statements of the two organizations, but apparently the trouble was largely due to attempts of the Timber Workers to disrupt the Four L, an endeavor in which it was unsuccessful. The union had a number of small local troubles with the employers, but the rising market raised wages rapidly enough to prevent much dissatisfaction. The only incident of the year worthy of special notice was a strike in Bellingham in the summer of 1919. The Timber Workers had been organizing at Bellingham and Anacortes and had succeeded in lining up about half of the crews at these places. It was contemplating making a concerted wage demand but one of the Bellingham lumber mills took the initiative and on July 23 discharged the shop stewards in one of its plants. The next day the crew in that plant and the other crews of the company struck to compel the reinstatement of the shop stewards. The strike soon spread to the plants and camps of three other firms. The companies agreed to advance wages and reinstate all the strikers except 14 leaders, but the union refused this offer. The strike gradually wore out, and by October 1 crews were about normal again. The union accused the I. W. W. and the Four L of scabbing, but apparently there was little interference by members of either of these organizations until the strike was definitely broken, when members of both organizations were in the new crews.[6] At the 1920 convention in Spokane there were present 35 officers and delegates, representing 12 locals on the West Coast, 4 in the Inland Empire, 3 in California, and 5 in the Lake States.[7]

[5] International Union of Timber Workers, Proceedings of 1920 convention, pp. 57-70; American Federation of Labor, Proceedings of fortieth annual convention, 1920, p. 38.

[6] Timber Worker, Aug. 2, Sept. 27, and Oct. 4, 1919; Four L Bulletin, August, 1919, p. 3 et seq.; November, 1919, p. 10; Washington State Federation of Labor, Proceedings of nineteenth annual convention, 1920, p. 10.

[7] Timber Workers' Union. Proceedings of 1920 convention, p. 12.

During the year ending February 28, 1921, the activities of the union were centered in the Lake States, and nothing of importance occurred in the Northwest. On May 3, 1920, the union began a vigorous strike for the eight-hour day in the mills and camps in the Lake States. The strike was a failure and was called off about July 1 in an attempt to preserve the union. The union claimed that 20,000 men were on strike. The membership was not over half this figure, but of course many men who were not members went out with them. About half of the mills in the region closed. The union ascribed the failure to the lack of finances and the strong employers' association.[8] Just after the strike ended the industrial depression struck the industry and the two combined to reduce the union membership to about 1,700 by February, 1921.

The 1921 convention was held in Minneapolis on March 28 and 29, 1921. It was attended by 22 delegates, 2 from the Pacific coast and the remainder from the Lake States. They voted to extend the term of the officers to two years and to hold the general conventions only in the odd-numbered years.[9] Tables 18 and 19 show the membership of the union, by districts and by months, for 1920. The rate of tax paid by the international union to the American Federation of Labor was 1 cent per member per month.[10]

TABLE 18.—NUMBER OF LOCALS, PER CAPITA TAX PAID TO THE INTERNATIONAL BY LOCALS, AND ESTIMATED MEMBERSHIP OF THE INTERNATIONAL UNION OF TIMBER WORKERS, 1920, BY DISTRICTS.

District.	Number of locals.	Total per capita tax.	Estimated membership.
West Coast	36	$7,099.67	1,183
Inland Empire	11	1,760.84	293
Lake States	74	29,900.19	4,983
South	19	851.25	142
California	8	3,507.50	585
At large	.....	227.50	38
Total	148	43,346.95	7,224

TABLE 19.—PER CAPITA TAX PAID BY THE INTERNATIONAL UNION OF TIMBER WORKERS TO THE AMERICAN FEDERATION OF LABOR, AND ESTIMATED MEMBERSHIP, 1920-21, BY MONTHS.

Month.	Per capita tax.	Estimated membership.
1920:		
March	$155.53	15,553
April	154.85	15,485
May	157.59	15,759
June	157.59	15,759
July	123.17	12,317
August	46.14	4,614
September	46.14	4,614
October	39.68	3,968
November	35.33	3,533
December	27.43	2,743
1921:		
January	17.02	1,702
February	17.02	1,702
Total	977.49	97,749
Average	.....	8,146

[8] International Union of Timber Workers, Proceedings of 1921 convention, pp. 30-32; Four L Bulletin, July, 1920, p. 7.
[9] International Union of Timber Workers. Proceedings of 1921 convention, pp. 6-9.
[10] Idem., pp. 57-63.

In April, 1921, the Timber Worker suspended publication, and since that date the union has had no official organ. During the two years since there has been but one event of importance in the history of the union, the Klamath strike of 1922. On February 24, 1922, the mills at Klamath Falls, Oreg., and in the Klamath Valley in California posted notices that on March 1 the day would be increased to 9 hours at Klamath Falls and to 10 hours in the valley. The strike began at Klamath Falls on February 28 and spread down the valley, reaching Weed on March 4 and McCloud soon after. There was a small local of the Timber Workers at Klamath Falls when the trouble started, and which practically all of the strikers joined as a means of better conducting the struggle. The strike was lost, and in June the union decided to permit its members to return to work, but it refused to call off the strike, as it held that such action would be an indorsement of the nine-hour day.[11] Except in some of the shingle mills, the Timber Workers' Union has been a negligible factor on the West Coast since early in 1921. Its officers did not even claim any of the credit for the wage increase in June, 1922.[12] In March, 1923, the union disbanded and surrendered its charter to the American Federation of Labor, and on March 23 closed its Seattle office.[a]

THE I. W. W.

The I. W. W. is in large part a protest against bad industrial conditions, particularly those which confront the migratory workers, and the most effective method of combating its propaganda is to remedy such conditions. While there is more than this to the I. W. W., it is a comparatively small proportion of the members who are interested very profoundly in this "something else." For most of the men who carry membership cards in it the I. W. W. is little more than a bond of groping fellowship or a quick remedy for some especially pressing problem.[13] For this reason the I. W. W. lost heavily in membership in the lumber industry after the granting of the 8-hour day in March, 1918. C. H. Younger, labor commissioner of Washington, reported that:

> The adoption of the 8-hour scale has deprived the organization [I. W. W.] of many members who saw no other way of winning the 8-hour fight, and the more recent action of Colonel Disque, whereby beds are to be furnished timber workers to save them from carrying blankets, has knocked another strong prop from under the I. W. W. propaganda.[14]

During the remainder of the war the I. W. W. was kept so busy with the defense of members charged with sedition that it had no time to devote to industrial action, but with the close of the war it revived its propaganda and began agitating for better conditions. Records of its strength are scanty and of doubtful value. At the general convention in May, 1919, the delegates were given a total of 352 votes, which, on the basis of one vote for 50 members, indicates approximately 17,600 members, of whom about 4,500 were in the

[11] Interview with E. B. Ault, editor Seattle Union Record, June, 1922; Four L Bulletin, April, 1922, p. 6; Evening Herald, Klamath Falls, Oreg., June 19, 1922, p. 1.
[12] Call, Harry: Interview, June, 1922.
[13] Casual Laborer and other Essays, by C. H. Parker, pp. 91–124; The I. W. W., by Paul Brissenden, p. 11 et seq.; "Why Men Join the I. W. W.," by Cloice R. Howd, in Four L Bulletin, March, 1923, pp. 10, 11.
[14] Quoted in Industrial Worker, Mar. 23, 1918, Supplement, p. 1.
[a] Four L Bulletin, April, 1922, p. 16.

Lumber Workers' Industrial Union, No. 120.[15] At the 1921 convention in May, 896 votes were cast, indicating a total membership of about 45,000, of whom about 15,000 were in the Lumber Workers' Industrial Union.[16]

Although on several occasions since 1918 the I. W. W. has tried most earnestly to secure a general strike in the lumber industry and has had many minor strikes, there was no disturbance of more than local significance until 1923. While the I. W. W. has been present in nearly every labor situation, it has never had much positive influence. The only times that I. W. W. activities came to the surface and attracted public notice were outside of the industry, as in connection with the Seattle general strike in February, 1919, and the Centralia riot on November 11, 1919, though both of these influenced the I. W. W. activities in the lumber industry.

Most of the I. W. W. influence on the West Coast during the past four years has probably come from the constant threat which it has been and from the ideas which it has spread among the loggers. On April 25, 1919, the publication of the Industrial Worker was resumed, and on February 1, 1923, it began to appear twice a week. It has aimed little direct propaganda at either the Timber Workers or the Four L until very recently—not that it approved of either, but probably because it was appealing to another constituency or because it considered an appeal to the facts as to wages and conditions as more effective propaganda. At present (spring, 1923) the I. W. W. is paying considerable attention to the Four L. Most of the propaganda is highly colored and unreliable as a source of facts concerning the industry or conditions of wages or living.

The I. W. W. issued a call for a general strike in the lumber industry on the West Coast for May 1, 1923, to secure the release of political prisoners and also to secure bedding in all camps. The strike began on Puget Sound and Grays Harbor on April 25, but the Oregon camps were not affected before May 1. About one-third of the loggers on the West Coast quit work, there being possibly 10,000 men idle. The strike was of short duration and, while some camps were forced to shut down, others were not so badly off and many were unaffected. Among the last named nearly all the Four L camps. The strike did not extend to the mills to any extent and was over in time to avoid any log shortage. There was some decrease in lumber production for about three weeks, but apparently not over 10 per cent at any time. The I. W. W. called the strike off on May 7 and urged the members to return to work and "carry the strike on the job," and most of the members returned to work, but there was little response to the demand for the "strike on the job." The net effect seems to have been negligible.[a]

SHOP COMMITTEE PLAN.

The timber workers' strike at a plant of a lumber mill at Bellingham in 1919 [17] was the occasion for the introduction of a shop committee plan. This plan covers three sawmills, two shingle mills, a

[15] I. W. W. Proceedings of eleventh convention, 1919, p. 4 et seq.; I. W. W. constitution, 1916 ed., Art. IV, sec. 7.
[16] I. W. W. Proceedings of thirteenth convention, 1921, pp. 3–7.
[17] See supra, p. 99.
[a] The Industrial Worker, April-May, 1923; Oregonian, Portland, Oreg., April-May, 1923; Four L Bulletin, May-June, 1923.

box factory, and a sash and door factory, with a total of about 1,000 employees. The company has enjoyed peace under it since late in 1919. The organization is very simple. The various plants at Larson have a committee with representatives from the various departments, while a similar committee exists at the Bellingham plants. These committees are strictly representative of the employees. They meet weekly, while the two committees meet together monthly in joint session with three officers of the company—the general superintendent and the two plant superintendents. A decision, to be binding, must be accepted by both committees voting together and by the employer representatives, the two groups voting separately, after which it is subject to veto by the president of the company or by a referendum of the employees. Provision is made for arbitration on appeal from the joint council or when it is unable to reach a decision. On December 12, 1923, the company stated that no question had reached the joint council which could not be settled there by mutual consent. The procedure for the settlement of grievances is simple. Any complaint, grievance, or suggestion is taken to a member of the shop committee in the plant, and he and the complaining employee take it to the foreman. If it is not adjusted there, it is referred to the committee chairman, who attempts to adjust it with the plant superintendent. In case it is not adjusted there it goes to the joint council, whose decision becomes a general rule for the company. A tie in the joint council may be broken by a vote of the president of the company, with further reference to arbitration. The company guarantees that no employee shall suffer any prejudice in his right to preferment or advancement by reason of any action taken on or through the committee. The committees are permitted to hold secret meetings, at which no member of the company staff or other person not a member of the committee shall be present without authorization of the committee and at which no minutes shall be taken.

Administration of all rules is in the hands of the company. Among the rules adopted or approved by the joint council is one guaranteeing the right of any employee to belong to any organization he desires except the I. W. W. Known members of the I. W. W. will not be kept on the pay roll. Solicitation for any organization will not be permitted on the job, and any employee who attempts to secure from any other source assistance which might be given by the shop committee forfeits his position. The company seems to be living up to the spirit of its agreement, and industrial relations appear to be on a satisfactory basis.[18]

COOPERATIVE MOVEMENT.

The cooperative movement in the lumber industry has developed chiefly among the shingle mills on Puget Sound. It first became important during the serious break in the shingle market in 1915. Owners found that they could not operate at a profit and adopted one of three alternatives—to cut wages, to shut down, or to sell out. The first two proved the easier and were generally followed, but some companies were able to arrange with the employees to run the mills

[18] "Shop committee cure for industrial unrest," by H. C. Thomas, in Review of Reviews, October, 1920, pp. 412–415; The Bloedel-Donovan shop committee plan and standard practice rules, in letter from Bloedel-Donovan Lumber Mills Mar. 9, 1922.,

on a cooperative basis. The employees took over the mills on one of three types of contract—outright purchase on time, a lease at a fixed royalty per thousand shingles cut, or a group wage of a given amount per thousand, where the employees had complete control of production, including the purchase of logs, but the owner marketed the shingles and paid wages in a lump sum to the crew. This last type of lease was vigorously opposed by the Timber Workers' Union on the ground that it failed to protect the workers.[19]

The growth of cooperatives continued during the duration of the bad market in 1915 and 1916, and early in 1917 it was reported that there were 20 or more real cooperative mills.[20] The organization of a cooperative company which took over a shingle mill in Olympia in 1916 furnishes a good illustration of the conditions under which the cooperative mills began. This plant had been shut down for a long time, and the employees were idle and behind in their store bills. The company offered the mill to the men on favorable terms, but it was necessary for the men to borrow several thousand dollars for operating capital. In order to secure such a loan from the bank the employees secured the indorsement of their creditors to their notes, the indorsements being given by the merchants as the only way they could expect to collect their bills. The venture proved a great success, and at one time a share (no par value) sold for $3,800. The by-laws of this company provide that each stockholder shall have an equal number of shares, that no stock transfer shall be complete until the new stockholder shall have been elected by the other members, that each stockholder shall have but one vote, and that all stockholders must be employees of the company. The cooperative mills usually pay the union scale, from which is deducted any assessments and to which is added any dividends, but the members of cooperatives do not usually keep up their union affiliations.[21]

There were in June, 1922, about 45 cooperative mills, of which about 40 were shingle mills. The average capacity of the cooperative shingle mills was a little less than six upright machines.[22] This represents about 15 per cent of the capacity of the district, or 25 per cent of the actual production, as the cooperatives operate more regularly than the commercial mills. Late in 1921 the cooperatives organized a selling agency for 21 of these mills, with a capital of $4,000, later increased to $25,000.[23]

The cooperative movement has passed through all kinds of market and labor conditions since 1915, and in June, 1922, was stronger than at any time in the past. The cooperatives have been able to avoid most of the pitfalls which have wrecked other attempts at producers' cooperation. In nearly every case the movement had begun in a mill which was bankrupt or nearly so, and the additions to the ranks of the cooperative mills have thus usually come in

[19] Timber Worker, Feb. 1, 1915, p. 4.
[20] Washington State Federation of Labor. Proceedings of sixteenth annual convention, 1917, p. 10 et seq.
[21] Interviews with William A. Spencer, graduate student of the University of Washington, and C. A. Johnson, manager Mutual Timber Mills (Inc.), June, 1922; "The cooperative shingle mills of western Washington," by William A. Spencer, in West Coast Lumberman, May 1, 1923, p. 42; May 15, 1923, p. 24; June 1, 1923, p. 36.
[22] An upright machine is considered the standard unit of shingle capacity. It usually cuts about 30,000 shingles per day, but sometimes cuts more than double that amount.
[23] West Coast Lumberman, June 1, 1923, pp. 41 and 44. "The cooperative shingle mills of western Washington," by William A. Spencer.

periods of depression. For example, during the depression of 1920–1922 a shingle mill in Ballard was purchased by the crew at a price estimated to be about 30 per cent of its replacement value. It was in serious financial difficulty at the time. The chief danger to which the cooperative mill has been subject is the gradual transformation into an ordinary stock company when the venture proves successful. This tendency has thus far not been significant, and the cooperatives are attempting to devise means to prevent it from developing. One of the methods is to require that all employees be stockholders and that each stockholder have the same amount of stock. The movement has not yet fully proven its merit, but on a small scale it is proving a material assistance in many cases.[24]

[24] Interviews with C. A. Johnson and William A. Spencer, June, 1922; "The cooperative shingle mills of western Washington," by William A. Spencer, in West Coast Lumberman, May, 1923, p. 42; May 15, 1923, p. 24: June 1, 1923, p. 36.

CHAPTER XIII.—A CONSTRUCTIVE INDUSTRIAL PROGRAM.

A constructive solution of any problem requires two things, an intimate knowledge of the details of the specific problem and a broad grasp of the various methods by which similar problems have been handled under other conditions. Specifically, the solution of the industrial problems confronting the West Coast lumber industry waits not only upon a detailed analysis, such as has been attempted in the preceding chapters, but also upon a broad survey of the methods of handling industrial relations in other industries in our modern world. It is such a survey which the present chapter attempts to give.

STAGES OF INDUSTRIAL AND COMMERCIAL DEVELOPMENT.

Since the beginning of the industrial revolution in England about 1760 there have appeared three quite clearly marked stages in industrial and commercial development, although they have not always followed each other in regular sequence. The first of these stages was the application of mechanical power to industry, with a consequent revolution of the whole industrial technique. Improvements in machinery and methods followed each other with almost bewildering rapidity, and manufacturers vied with one another in securing the most modern equipment even though it meant scrapping comparatively new machinery. The business man was intensely interested in the processes of his industry; he knew machinery and took pride in having a more up-to-date and efficient plant than his competitors. Intense competition and secrecy were the rule; it was an unusual man who was willing that a competitor should know the inside story of his business. Manufacture was the center of attention; marketing was relatively neglected. Although there were marked exceptions, in general demand was sufficient and selling was not difficult.

The second stage came when decreasing costs were met by an inelastic demand, when the reduction in price made possible by larger production was no longer sufficient to increase consumption. At this point the chief problem of the business man was one of marketing. He was equipped to produce a larger volume at a lower unit cost provided he could sell his product. He had to learn the art of marketing or give place to some one who could, for a larger sale meant a lower unit cost and so a lower sales price. But price cutting tended to eliminate not only the unfit but all of the profit for everyone. With this change in emphasis from manufacture to marketing came a change in the attitude of business men to each other. At first it intensified the competitive, individualistic attitude, but they gradually came to see that their problems were those either of increasing sales or of decreasing production, and that in either of these efforts cooperation was the only solution. It was from such a condition as this that the trade association, the pool, the trust, the monopoly was born. In many cases such combinations were formed to secure the economies of large-scale production; at other times

their chief function was to increase the market by standardizing quality or by a unified advertising campaign, while in still other cases efforts were made to reduce production by fixing a minimum price or by a definite agreement as to the amount which should be produced. This latter type of agreement was often made effective by closing certain plants or by closing all plants for a given period.

During the long period when returns were fairly constant and demand was elastic, from the days of mercantilism or even earlier, the public had been educated to the idea that competition was the life of trade. When producers began to cooperate in an attempt to eliminate cutthroat competition the public became alarmed because of the great power in the hands of a combination of producers, whether organized in a trade association or in a more formal manner. Usually there were good grounds for these fears, since most of the early combinations were formed in order to increase prices. This situation gave rise to the third stage—that of public regulation of business. This manifested itself in various antimonopoly or antitrust laws, first in England and later in the United States. At present there are pretty clear indications that this regulation is becoming positive rather than negative; that while the public is beginning to realize that a combination may be socially advantageous, it also realizes that such great power must be subject to public control. This tendency is at present most clearly seen in the case of the railroads, but the movement is by no means confined to this industry.

STAGES OF DEVELOPMENT OF WEST COAST LUMBER INDUSTRY.

The West Coast lumber industry has shown all of these stages, the second being dominant now. The half century before 1910 was a time of rapid technical development, which lasted somewhat longer in the camps than in the mills. During this period the donkey engine, cable, and "sky line" took the place of hand logging, and in the mills the sash saw which "went up to-day and down to-morrow" was displaced by the band mill. For a decade rapid technological change seems to have ceased, and mills as much as two decades old are not hopelessly out of date. Most of the old-time lumbermen had come up through the camps or mills and knew the machinery and methods of the industry, but as for salesmanship, well, "if anyone wants this lumber, let him come and get it." This type of manufacturing is passing. To-day the industry is controlled by men who came up through the office and who know the problems of finance and marketing and appreciate the necessity of cooperative effort to standardize grades, to advertise and sell, and to maintain the market.

The manufacture of lumber is in the difficult position of requiring cooperative action to keep it in a healthy condition, but of being unable to secure the requisite uniformity of action. The features which make combination desirable are the heavy overhead, a productive capacity from 50 to 100 per cent in excess of market demands, and a very inelastic demand. On the other hand there is a widespread ownership. There are about 40,000 sawmills in the United States, representing nearly as many owners. The number of timber owners runs into the hundreds of thousands. The billions of dollars invested in these properties make it impossible for a single company to

purchase all of them, while the widespread ownership makes amalgamation unthinkable. Even when a group of manufacturers have reached an agreement to maintain prices or temporarily to curtail production, there has usually been some member of the group who broke the agreement. In spite of vigorous efforts by able men to stabilize the market in this manner it has never succeeded.

Yet there is a group of far-sighted men in this industry who are able to enter into a cooperative program and to subordinate individual programs and desires for the good of the industry. These men are putting the manufacture and marketing of lumber on a more businesslike basis. This involves some restraint of trade and some limitation of competition, but cutthroat competition must be eliminated in the interests not only of the timber owners and sawmill operators, but also of labor and the consumers of lumber, and, above all, of posterity. At present there are few profits and many lossses to timber owners and lumber producers, labor is irregular and usually underpaid, and prices fluctuate widely and violently, while an enormous amount of timber is wasted because of lack of markets for the lower grades.

INDUSTRIAL RELATIONS.

With industrial and business development there must come a change in labor relations. Before the lumbermen learned the value of associated effort, each one looked upon the business as "his" and resented any interference with his management of it. He was suspicious alike of organizations of labor and of fellow employers. As long as the business was small enough for the employer and employee to know the details of it and to know each other as "Tom" or "Bill" there were few difficulties that could not be peaceably adjusted on the basis of common knowledge and human relationships. But when the size and complexity of the business increased until employer and employee lost this common ground of intimate acquaintance with each other and with the details of the business, trouble began. Usually the employer failed to realize that conditions had changed and so made no provision for meeting the problems which were sure to arise. Sometimes out of benevolence or good business insight he established good conditions or paid good wages, but usually in such cases he "gave" these as favors. He did not admit, usually he did not realize, that the employees had any right to a voice in the determination of the conditions under which they worked.

Many employers are coming to realize, partly as a result of their experiences in the trade associations, that there are three partners in industry, the men who invest their money, the men who invest their labor, and those who use the product, and for any partner to disregard the interests of the other two will injure all of them. They are beginning to see that not only as a matter of justice, but even more of plain common sense, it pays to give the men some voice in the control of the business. If the employer would preserve the good will of the public, his customers, he must keep on good terms with his workmen; the public demands that industry shall settle its differences without disturbing the neighborhood.[1] This is not merely

[1] The recognition of this fact is seen in the numerous companies which advertise to their customers the nature of their labor policy. A good labor policy and relations is a good selling argument, although not a determining one.

a passing fad; the closer relations between the three partners in the growing complexity of modern society are increasing the public demand for peace, and the public is coming to believe that peace can be preserved. Society has not yet fully made up its mind with regard to the value of the trade-union as it now exists, but it has decided that labor has a right to organize and to bargain collectively, and that industry should not pass on to society any of the problems which it creates, either those arising from strikes or those arising from industrial accidents, seasonal employment, unemployment, low wages, long hours, or any other cause. The public is coming to believe that danger lies, not in large combinations of labor or capital but in irresponsible combinations, be they large or small. Large business units or strong labor unions will meet with public approval provided they properly safeguard the public interest. The public prefers that industry shall settle its own problems, but if it can not, then, as a last resort, the public will step in and do it.

FUNDAMENTAL ISSUES BETWEEN EMPLOYER AND EMPLOYEES.

Industrial relations involve certain fundamental issues between the employer and his employees, in the settlement of which the public has a deep interest. These issues may be classified thus:

> In the first place there is the issue between wages (including hours of work and security of employment) and profits. * * *
>
> Secondly, there is the issue between the democratic aspirations of the workmen who desire to exercise some power over the conditions under which they work and what the employers consider as their domain of power. * * *
>
> Thirdly, there is the issue over certain abuses of which both sides are guilty, such as, on one side, ill-treatment by foremen, unjustified discharges, discrimination against union men, and, on the other, soldiering on the job, violation of shop discipline, and discrimination against nonunion men.[2]

With such issues between employers and employees is it possible to have anything except perpetual warfare? In other words, are these issues really fundamental or do they arise from ignorance and prejudice? The I. W. W., of course, accepts these differences as ultimate and can see no hope of any agreement between the two parties. Accordingly it refuses to seek peace, but rather bases everything on a revolution which shall eliminate the employer. Others feel that these issues are not insuperable obstacles to lasting peace, since there are large areas in which the interests of employer and employee are the same, and where there is an issue there is also a method of meeting it. There are several methods by which the issues may be met and industry carried on.

TYPES OF INDUSTRIAL RELATIONSHIPS.

OPEN SHOP.

At present the type of industrial relationship most popular with American employers is the antiunion shop and the individual bargain. There are several reasons for this. The most important is the instinctive desire for mastery, coupled with the traditional idea of absolute property rights. By far the most common objection raised by employers to any type of collective bargaining with their

[2] New Jersey. State Chamber of Commerce. Committee on Industrial Relations. Report on Industrial Relations: Three Roads open before Employers, July, 1921. Much of the discussion in the following pages on the open shop, union recognition, and the shop committee is taken from this report.

workmen, no matter how organized, is based upon these premises. The writer recently interviewed a considerable number of employers in the lumber industry, and by far the most common objection to any type of collective bargain, whether through the ordinary trade-union or the Four L, was based upon this desire for control. "We want to run our own business." In connection with this undemocratic attitude is the fear of collective bargaining born of unfair practices by the unions and a general suspicion of union men. These attitudes are extremely unfortunate. The President's Mediation Commission in 1917 reported that it was largely the uncompromising attitude of the employers toward the unions which had given the I. W. W. a chance to dominate the lumber industry in 1917.[3] The I. W. W. still stands ready to fill the gap left by the absence of any other industrial organization in the lumber industry, but it seems to have little power to displace any organization which is actually functioning, be it Four L, shop committee, or Timber Workers' union. An individual employer may be able to maintain peace in his plant without any labor organization entering, not even the I. W. W., but apparently those who come nearest to doing this have a very large labor turnover.

COLLECTIVE BARGAINING THROUGH LABOR UNIONS.

The second method of conducting industrial relations, second both in the date of its development and the extent of its adoption, is collective bargaining through the ordinary type of labor union. While such a method has probably never completely solved the problem, there are numerous records of reasonable success, where the employer and the union have been able to work together in the main harmoniously. Such agreements between the union and the employer or group of employers furnish the machinery for the peaceable adjustment of issues which arise in the industry. In some cases, notably the agreements between the Amalgamated Clothing Workers and the National Industrial Federation of Clothing Manufacturers, these relations have reached a high plane, and a really scientific attempt has been made to solve the problems at issue between the parties to the agreement. In many other industries less elaborate agreements have been in force for many years, bringing a large measure of peace to the industries in question. Still, even in the case of the clothing workers, the agreement was not sufficient to prevent a strike. If there has ever been a time when peace has been preserved in the West Coast lumber industry in this manner it has been local and temporary.

The limited success of union agreements has been due to a number of factors, chief of which is the unreasonableness of the unions, or employers, or both. Because of the lack of an adequate method of procedure in case of a deadlock, final appeal has often been made to strikes or lockouts, with consequent loss to all parties, including the public. But a union is not necessary for industrial war. Many of the most costly and bitter labor wars in American industrial history have occurred where the workmen were entirely unorganized until after the trouble assumed an open break. We can not reject the unions until we find some other method of settling diffi-

[3] United States Department of Labor. Sixth Annual Report of the Secretary of Labor, pp. 21–23.

culties which shall have fewer drawbacks than does bargaining outside of the law by fairly evenly matched organizations, with a final appeal to war.

In the West Coast lumber industry the question of union recognition is less pressing than in many other places. Except among the shingle weavers, there has never been a large proportion of the workers organized, and the organizations which did exist were of a type which made collective bargaining especially difficult. Most of the time during the past 15 years the I. W. W. has been stronger than the unions affiliated with the American Federation of Labor, and it has been impossible to develop any policy in agreement with the I. W. W., as it refuses absolutely to sign agreements. The I. W. W. does not bargain collectively—it collectively takes all it can get and gives as little as possible.

SHOP COMMITTEE.

The third widely known and accepted method of adjusting industrial relations is through a shop committee. While there is no standard type of shop committee plan, the numerous committee systems in operation in the United States exhibit certain peculiarities, chief of which are election of delegates by the workers in the plant, union of these delegates into a committee or committees, and dealing by the company with this committee or committees, either in a joint committee session or by interviews. Usually, but not always, the plan requires the employee representatives to be employed by the company. The fundamental idea back of this arrangement, whatever the details of the plan adopted, is that industrial problems shall be settled by collective bargaining on a scientific basis, with both sides having a voice in that settlement. Often provision is made for a final resort to arbitration when direct negotiation fails to reach a settlement. The functions of the committees vary from plant to plant, but usually include most of the matters which affect the workers, from employee entertainments to determination of wage scales. In most companies where such a system exists it has been able to adjust all problems to the satisfaction of both parties, and arbitration is seldom resorted to. The plan has satisfied the demands of most of the workers for a genuine voice in the control of industry and has largely eliminated or quickly adjusted all the grievances which have arisen between employer and employee, usually with much less friction and bitterness than where adjustment has come through a union.

On the other hand, there are several serious objections to the shop committee. From the point of view of the employer, perhaps the most serious of these is the local nature of any adjustment reached, which, in the nature of the case, can apply only to the plant in which it is reached. Many employers are by no means averse to granting high wages and good conditions, provided their competitors do the same, thus preserving the competitive advantages. Competition makes it much more difficult to establish or maintain satisfactory standards of wages, hours, and conditions in a single plant than in a whole industry. There are also many employers who object to any attempt of this kind on the ground that employees are not to be trusted or that the employer must preserve his control in order to make the business a success. These latter objections, if accepted,

will bring the industry back into the condition of chaos where no attempts are made to preserve peace. There is, however, a valid objection arising from the inability of a large proportion, probably much less than a majority however, of the employees to appreciate the responsibilities of such democracy, but this is a weakness of all democracy and must be frankly faced and corrected by training in self-government. This training can be done rather rapidly in the plant, and the functions of the committees can be increased as both employers and employees learn to use the system.

The union objections to the shop committee system have been formulated as six specific weaknesses of the plan:

> First, elections are unfair and by intimidation the company secures the election of bosses who will take the part of the company.
> Second, the men are not permitted any organization through which they can formulate their desires or grievances.
> Third, any committeeman who makes a stand for the workers is summarily discharged and has no protection.
> Fourth, expert bargaining assistance is prohibited to the men.
> Fifth, the workers have no power to enforce their demands.
> Sixth, the company will not permit the shop committee to consider questions of vital importance, such as wages, hours, and working conditions.[4]

Where the first, third, and sixth of these objections are true, it means that the committee plan is merely a blind, intended to appease the workers by making them think they have rights which they do not possess, and as such the committee can not long be effective in any way. The other objections possess more truth but less significance, since the purpose of the plan is to reach a mutually satisfactory solution of the problems. While the employees may not meet together to formulate demands, yet the employee members of the shop committee usually may meet by themselves to determine the best method of presenting questions. It is a question how far the shop committee plan makes unnecessary the employment of expert bargainers for the workers and a reserve power of strike; certainly they are not parts of the usual shop committee system.

A balancing of accounts with the shop committee seems to indicate that it has certain great values and some very serious weaknesses. Chief among its values is the provision it makes whereby employers and employees can reach a just and mutually satisfactory solution of their problems, a solution based upon a careful consideration of all the facts in the case. It is a compromise with revolution such as is urged by radical labor leaders, but a compromise based as much or more upon a genuine desire and attempt to recognize fundamental human rights, and to find a just and right solution of the problems at issue, as upon fear or necessity. The system helps to train men for citizenship and leadership in industry and life; it removes some of the objectionable inhibitions present in modern industry; it is, in many cases, an attempt to make better men as well as better goods. The chief weaknesses of the plan are, from the standpoint of the employer, the failure to set standards for the industry and the dealing with imperfect men, and, from the standpoint of the worker, the lack of any means of coercion for the employer who is not willing to do the right thing in his relations with his employees. The success of the plan rests on the sincerity of the men who are working it; it can not succeed where men are not willing to play perfectly fair.

[4] American Federation of Labor. Proceedings of thirty-ninth annual convention, 1919, p. 302 et seq.

THE FOUR L PLAN.

The Four L is an attempt to remedy the two weaknesses of the shop committee plan just mentioned. It is in reality a large number of shop committees bound together into an industrial council, which determines standards for the industry as a whole, and which seeks to enforce the standards. By covering the whole of a competitive field it seeks to establish standards for the district which shall be just to labor and yet not injure the employer by discriminating between employers. It has also, by means of the employer bond and the withdrawal notice, attempted to guarantee the sincerity of the employer. The bond was abolished because employees and employers alike believed that experience had shown that the employers could be trusted, that their word was as good as their bond. The test of the Four L must be along these lines. Has it been able to set and maintain standards throughout the industry, and has it been able to prevent shortsighted and unscrupulous employers or employees from taking advantage of others in the industry?

The Four L undertook the task of setting and maintaining standards of wages, hours, and working conditions for the entire region by democratic action in which employers and employees should have an equal voice, and of adjusting, on the basis of these standards, all difficulties which might arise. The only objection to the Four L which does not apply with equal force to the shop committee is that the Four L lacks the flexibility of the shop committee. The Four L does not permit an employer to lower standards even though all of his employees should agree that he should. But it was just this individual lowering of standards that constituted the chief weakness of the shop committee plan. One of the greatest needs of this industry is for some force to compel inefficient companies to observe adequate standards of wages, hours, and working and living conditions. The Four L organizes the employers for this purpose, and as an organization is able to exert strong pressure toward the preservation of standards—standards which many mills and camps would like to cut if they could.[5] It is probable that it is this organized employer support which has preserved the 8-hour day, which now seems to be firmly established in the Northwest. Except in unusual market conditions and in districts where the stump rancher dominates the situation, the Four L minimum wage is generally maintained even by non-Four L plants. The one place where Four L standards have not been generally maintained is in the logging camps, with regard to living conditions there. This is probably due to the fact that the large amount of I. W. W. sentiment among the loggers, as well as their migratory habits, has prevented the development of strong Four L locals in the camps. There is no agency in the camps with which the employer can deal. This preservation of standards assists materially in maintaining the market stability, and it is not merely a coincidence that the leaders in the West Coast Lumbermen's Association are in nearly every case Four L enthusiasts. It is at least significant that when one large lumber

[5] This pressure is effective chiefly in shaping public opinion in the communities where the plants are located or where they recruit their labor. Particularly in a sn all community the employer, who usually lives near his plant, dislikes very much a reputation for unfairness or harshness in labor relations.

company recently withdrew from the Four L it at the same time withdrew from the association.[6]

Present industrial tendencies are in the direction of a larger participation of the employees in the control of industry, toward a fuller measure of industrial democracy. Before this can go very far each side must learn to play fair and to trust the other to do the same. There are many workmen, not all I. W. W. by any means, who refuse to admit that capital has any rights which they should respect and who are willing to take any possible advantage of the employer; there are employers with the same disregard for the rights of others who are willing to crush labor whenever they have the power. Any individual or group who in any way is willing to take an unfair advantage of others is undermining the very foundation of our civilization. There is enough of suspicion and hatred; the need is to develop trust and good will. The great weakness of the Four L has been the lack of such mutual trust and good will and the fact that neither side has played perfectly fair. To some extent each side has suspected the other of trying to take an unfair advantage and tried to "beat them to it."

Each side is learning, however, to trust the other and is finding that part of the trouble all along has been this mutual suspicion. Both sides are discovering that justice pays and are beginning to try it out. As they get better acquainted each side finds the other to be better than it thought and trust helps to produce trustworthiness. It is probably the chief merit of the Four L that it is replacing suspicion and hatred with mutual trust and good will. The method of conference is making it possible for the two partners to sit down together and find the just solution for their industrial problems.

The Four L does not expect immediately to remedy all the evils of industrial relations of the West Coast lumber industry. There are two kinds of reformers—those who center their attention on the evils of a situation, neglecting the good features, and attempt to remove the evils without proper consideration for the good elements in the situation, and those who center their attention on the good elements, which they attempt to develop, eliminating evils when it can be done without endangering the good. The I. W. W. tries the first method, the Four L the second. The Four L believes that the most important thing at the present time is to develop a spirit of confidence and good will, in the faith that such a spirit will remove evils as rapidly as possible. It would rather postpone the correction of some specific evil than injure the industry or create suspicion or bad feeling, convinced that confidence and good will is the only certain way of finding a remedy. There is little profit in removing an evil when in so doing the industry is destroyed or crippled, but the development of a better spirit between employer and employee helps everyone. That such a spirit has developed is shown by the statements of employers and employees who have had experience with the Four L.[7]

The Four L is by no means perfect. Experience is continually revealing defects and improvements are as constantly being made. As the president pointed out at the May, 1922, meeting of the board

[6] It has frequently happened in the past, when an employer believed that he could always cut costs by cutting wages, that he has not hesitated to cut prices, sometimes even in competition with another plant of the same company or with his own sales agency. It seems to be generally felt, since the Four L is holding wages more stable, that price cutting is less safe than formerly.

[7] Four L Bulletin, January, 1922, pp. 6–18.

of directors, criticism is passed upon the Four L from three angles. He said:

> The first is a question as to its security, the second a question as to its sincerity, and the third a question as to its flexibility.
>
> As to security. Men have said that our membership is too easily given up. The chairman of a local complained a year ago, "Some of us in this local have spent two years in building up membership. We have worked hard, then wages come down and the company withdraws, and in a month or less our two years' work is destroyed." That raises a real question. It is the question whether a group of men can be asked with good heart to build up year after year an organization with understanding and confidence under the continual fear that very suddenly their work can be undone. I think that is one of the most important questions that is coming to you. * * *
>
> Many honest men have questioned also the organization's sincerity, the honesty of its fifty-fifty principle. They have done so mainly on the ground that foremen and other so-called "company men" have been elected to our councils, and on the supposition that through these the organization may be controlled by its employer members. To these skeptics I have said three things: First, I have explained that members of district boards and the board of directors are elected by local delegates through secret ballot. The men have the representatives they choose. Second, I have reminded the questioners that powers of leadership are likely to be recognized in the plant as well as in the local. Four L representatives have frequently been advanced to positions of responsibility in the operation. They have not felt, and their comrades apparently have not felt, that they were by this unfitted to represent the men in the councils of the Four L. In the third place, I have stated the obvious fact that foremen must be interested in the Four L and willing to work with it if it is to succeed. As well try to train an army without sergeants and corporals as try to get results without the cooperation of the foremen. On the other hand, I have had foremen themselves point out to me the dangers of having too many of these subordinate officials in our councils. * * *
>
> As to the flexibility of our organization, its adaptability to conditions of time and place, questions are frequently raised by operators [employers]. * * * Sawmills, with ships coming ahead of schedule and with their cargo not ready, have objected to the inflexibility of our regulations. There are also logging camps which we can not organize because under our rules time lost through breakdown or storms can not be made up after hours at straight pay, even if the men should vote by large majority to do so. It may be that such local needs can not be met without incurring serious general danger of the breaking down of our essential standards.[8]

In so far as these and other criticisms are well taken, serious efforts are being made to correct the conditions. No organization can ever fully satisfy all objectors, and the Four L will continue to be criticized. In general, however, the majority of the members of the Four L, employer and employee alike, believe that the organization is doing all it can to answer these objections.

What of the future? Who can say? The Four L seems to be on the right track, for it is in harmony with the spirit of the times and the evolution of industry. It is an experiment in industrial democracy in probably the most hopeful manner possible in this industry at the present time, but where democracy itself is on trial we can not be too sure of the success of the Four L. Its chief danger seems to be the same as the one facing political democracy—the ignorance, selfishness, and neglect of those with whom it works. The Four L is endangered by the presence in the industry of narrow-minded and shortsighted employers and employees. Employers who selfishly seek their own immediate ends, indifferent to the welfare of the industry as a whole, or who are unable to appreciate the value of collective action; employees who seek immediate individual advantage regardless of the good of their fellows, or who, like the I. W. W., accept the doctrine of the class war and refuse to cooperate in im-

[8] "Some of our difficulties," in Four L Bulletin, June, 1922, p. 7 et seq.

proving conditions—these are the real foes the Four L has to fear. The changing industrial conditions and public opinion seem to be decreasing the number of narrow-minded and selfish employers.

An even greater danger is that the members of the Four L will neglect the machinery except when there are troubles to adjust, thus permitting the organization to get out of working order and causing it to fail in times of need. The employer may leave too much to the workmen, they too much to him—the Four L demands the constant attention of both to make it the success it appears capable of becoming. It must demand the continued efforts of all concerned constantly to improve conditions in the industry and to promote the closest harmony between the employer and the employee. Should it grow content with less than this, it is in serious danger. But the future seems to be bright for a constructive settlement of a large part of the problems of the industry by this means.

APPENDIX—BIBLIOGRAPHY.

Most of the data on the various subjects treated in this study are to be found in contemporary publications, chiefly periodicals. No attempt has been made to list this material in detail. The purpose of this bibliography is, first, to list the most important original sources, and second, to refer to the more important articles or books dealing with some specific aspect of the problem. Only articles which go beyond the discussion in the text or present it from a different angle are here listed.

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SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS

*[The publication of the annual and special reports and of the bimonthly bulletin was discontinued in July, 1912, and since that time a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively, beginning with No. 101, and up to No. 236 they also carry consecutive numbers under each series. Beginning with No. 237 the serial numbering has been discontinued. A list of the series is given below. Under each is grouped all the bulletins which contain material relating to the subject matter of that series. A list of the reports and bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application. The bulletins marked thus * are out of print.]*

Wholesale Prices.

*Bul. 114. Wholesale prices, 1890 to 1912.
Bul. 149. Wholesale prices, 1890 to 1913.
*Bul. 173. Index numbers of wholesale prices in the United States and foreign countries.
*Bul. 181. Wholesale prices, 1890 to 1914.
*Bul. 200. Wholesale prices, 1890 to 1915.
Bul. 226. Wholesale prices, 1890 to 1916.
Bul. 269. Wholesale prices, 1890 to 1919.
Bul. 284. Index numbers of wholesale prices in the United States and foreign countries. [Revision of Bulletin No. 173.]
Bul. 296. Wholesale prices, 1890 to 1920.
Bul. 320. Wholesale prices, 1890 to 1921.
Bul. 335. Wholesale prices, 1890 to 1922.

Retail Prices and Cost of Living.

*Bul. 105. Retail prices, 1890 to 1911: Part I.
Retail prices, 1890 to 1911: Part II—General tables.
*Bul. 106. Retail prices, 1890 to June, 1912: Part I.
Retail prices, 1890 to June, 1912: Part II—General tables.
Bul. 108. Retail prices, 1890 to August, 1912.
Bul. 110. Retail prices, 1890 to October, 1912.
*Bul. 113. Retail prices, 1890 to December, 1912.
Bul. 115. Retail prices, 1890 to February, 1913.
*Bul. 121. Sugar prices, from refiner to consumer.
Bul. 125. Retail prices, 1890 to April, 1913.
*Bul. 130. Wheat and flour prices, from farmer to consumer.
Bul. 132. Retail prices, 1890 to June, 1913.
Bul. 136. Retail prices, 1890 to August, 1913.
*Bul. 138. Retail prices, 1890 to October, 1913.
*Bul. 140. Retail prices, 1890 to December, 1913.
Bul. 156. Retail prices, 1907 to December, 1914.
Bul. 164. Butter prices, from producer to consumer.
Bul. 170. Foreign food prices as affected by the war.
Bul. 184. Retail prices, 1907 to June, 1915.
Bul. 197. Retail prices, 1907 to December, 1915.
Bul. 228. Retail prices, 1907 to December, 1916.
Bul. 270. Retail prices, 1913 to 1919.
Bul. 300. Retail prices, 1913 to 1920.
Bul. 315. Retail prices, 1913 to 1921.
Bul. 334. Retail prices, 1913 to 1922.

Wages and Hours of Labor.

Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
*Bul. 118. Ten-hour maximum working-day for women and young persons.
Bul. 119. Working hours of women in the pea canneries of Wisconsin.
*Bul. 128. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912.
*Bul. 129. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912.
*Bul. 131. Union scale of wages and hours of labor, 1907 to 1912.
*Bul. 134. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912.
*Bul. 135. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912.

Wages and Hours of Labor—Concluded.

Bul. 137. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912.
Bul. 143. Union scale of wages and hours of labor, May 15, 1913.
Bul. 146. Wages and regularity of employment and standardization of piece rates in the dress and waist industry of New York City.
*Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
*Bul. 150. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913.
*Bul. 151. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912.
Bul. 153. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913.
*Bul. 154. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913.
Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
Bul. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
Bul. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
Bul. 168. Wages and hours of labor in the iron and steel industry, 1907 to 1918.
*Bul. 171. Union scale of wages and hours of labor, May 1, 1914.
Bul. 177. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914.
Bul. 178. Wages and hours of labor in the boot and shoe industry, 1907 to 1914.
Bul. 187. Wages and hours of labor in the men's clothing industry, 1911 to 1914.
*Bul. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
*Bul. 194. Union scale of wages and hours of labor, May 1, 1915.
Bul. 204. Street railway employment in the United States.
Bul. 214. Union scale of wages and hours of labor, May 15, 1916.
Bul. 218. Wages and hours of labor in the iron and steel industry, 1907 to 1915.
Bul. 221. Hours, fatigue, and health in British munition factories.
Bul. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
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Bul. 238. Wages and hours of labor in woolen and worsted goods manufacturing, 1916.
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Bul. 245. Union scale of wages and hours of labor, May 15, 1917.
Bul. 252. Wages and hours of labor in the slaughtering and meat-packing industry, 1917.
Bul. 259. Union scale of wages and hours of labor, May 15, 1918.
Bul. 260. Wages and hours of labor in the boot and shoe industry, 1907 to 1918.
Bul. 261. Wages and hours of labor in woolen and worsted goods manufacturing, 1918.
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Bul. 265. Industrial survey in selected industries in the United States, 1919. Preliminary report.
Bul. 274. Union scale of wages and hours of labor, May 15, 1919.
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Bul. 288. Wages and hours of labor in cotton goods manufacturing, 1920.
Bul. 289. Wages and hours of labor in woolen and worsted goods manufacturing, 1920.
Bul. 294. Wages and hours of labor in the slaughtering and meat-packing industry in 1921.
Bul. 297. Wages and hours of labor in the petroleum industry.
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Bul. 305. Wages and hours of labor in the iron and steel industry, 1907 to 1920.
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Employment and Unemployment.

*Bul. 109. Statistics of unemployment and the work of employment offices.
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*Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
*Bul. 183. Regularity of employment in the women's ready-to-wear garment industries.
Bul. 192. Proceedings of the American Association of Public Employment Offices.
*Bul. 195. Unemployment in the United States.
Bul. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, January, 1916.

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Bul. 202. Proceedings of the conference of Employment Managers' Association of Boston, Mass., held May 10, 1916.
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*Bul. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
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*Bul. 117. Prohibition of night work of young persons.
*Bul. 118. Ten-hour maximum working-day for women and young persons.
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*Bul. 122. Employment of women in power laundries in Milwaukee.
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*Bul. 185. Compensation legislation of 1914 and 1915.
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*Water transportation.