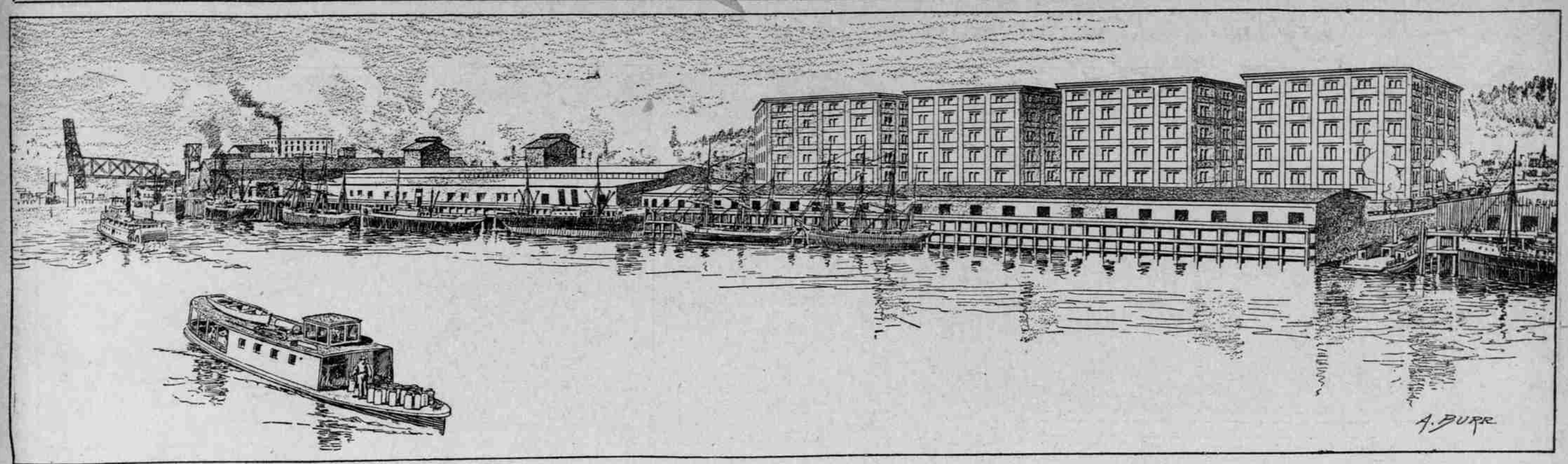
PUBLIC DOCKS BUILT AS PREPARATION FOR PANAMA CANAL

First Steps Are Taken in Plan to Provide Most Modern Accommodations for Ships—Twenty-Five Miles of Frontage Available for Deep-Sea Vessels



SKETCH OF PORTLAND'S FIRST PUBLIC DOCK AS IT WILL APPEAR COMPLETED.

By G. B. Hegardt, Engineer Commission of Public Docks.

PORTLAND, in keeping with other Pacific Coast ports, is making preparations to enlarge her port facilities, not only for the purpose of caring for the increased ocean commerce expected as a result of the opening of the Panama Canal, but nearly in an equal measure for the increase in commerce due to the development and expansion of its tributary territory.

While the opening of the Panama Canal will, to a considerable extent, revolutionize the Coast ocean-carried traffic, it is not thought the change will be very radical or sudden in its workings, for it must require several years to accomplish the readjustment of routes and rates which will affect not only the trans-ocean traffic of the United States, but also a great portion of that of the other maritime nations of the world. What will actually take place can be, of course, only a matter of conjecture at this time. The development will, of necessity, be gradual to begin with.

This is not saying that the Pacific Coast will not reap great benefit from the completion of the canal or that the ports of the Coast should lose sight of the fact that the time to get ready for the great waterway is very short and that much is to be done if they are to secure and hold their share of the business, for it is known that nearly every maritime nation expects to participate in the increased traffic and is building vessels for this new field to care for the greater business which will move by water.

What is meant is that the enthusiast, who expects as an immediate result a condition it must take several years to establish, is apt to be disappointed. It must be evident that such a condition cannot be immediately created for the population of the Coast cannot be at once materially increased, and further development of the area tributary to the port is necessary before actual increase in production can take place; in other words, such development will follow gradually and must be the result of increase of population and development and not as the sole effect of the opening of the canal.

There is, however, one important product that should feel the immediate effect of the opening of the canal, and this product is lumber. This item seems to be subject to immediate expansion due to the fact that already there are a sufficient number of sawmills in existence to permit of the doubling of the lumber output at the expenditure of very little effort and money, and by working these plants to their fullest capacity the output can be still further increased. Another matter in connection with export of lumber is that it will furnish return loads for vessels that arrive with cargoes from the Atlantic seaboard, Europe and elsewhere, which is of great importance as tending to balance the shipping of various Northern ports until development of the Coast can supply return cargoes in a greater degree than is now possible.

The great fruit industry of the Coast also should be largely benefited through the shipment and distribution by way of the Panama Canal of these products in the world's markets, in the same manner as is the banana trade on the Atlantic Coast.

But perhaps the more important and immediate benefits which will result from the opening of the canal will be the establishment of regular and speedy steamship service with the Atlantic seaboard, which will have the effect of reducing the cost of transportation and distribution of many commodities now brought across the continent by rail. This would also tend to lower the cost of many of the articles now consumed on the Coast and the raw material used in manufacture.

In a similar manner, but perhaps not to so great an extent, will regular steamship lines to the Orient and Europe add to the commerce of the port.

The effect of the canal should also be seen in the bringing to the Pacific Coast of a desirable class of immigrants to settle on the vacant and unimproved lands and supply the demand for farm and other labor so much needed in the development of the Coast's scarcely-touched resources.

To continue its growth and enable it to meet the competition of other Coast ports and secure and retain its share of the increased ocean commerce expected as a result of the opening of the Panama Canal, and for the increase in commerce due to the development and expansion of its tributary territory, it is important not only that Portland provide adequate and modern harbor facilities to care for this traffic and shipping, but, perhaps, in still greater measure, that it bend every energy and permit of no delay in accomplishing the completion of the port's channel approaches in accordance with the approved project improvements now under way.

It is well to realize, however, that Portland, with its strategic position with reference to its "hinterland," favorable grades of the railroads leading to it and its many other natural advantages, has just begun the real fight for its existence as a shipping center; that its claim as a first-class seaport can be maintained only by the systematic and large expenditure of money and that, in order to provide the facilities necessary to attract the modern—that is, the economical—carrier, public opinion must be aroused to the necessity of giving generous support and encouragement to those who are fully aware of the situation and who are endeavoring to bring about the conditions which will accomplish the desired results. This includes not only the furnishing of a deep waterway to its docks and adequate harbor facilities for the handling of cargoes, but also the establishment and support of steamship lines and the means of supplying steamers with fuel of a quality and price obtainable at other competing ports, for it is a well-known fact that no city, no matter how favorably situated and no matter what its natural advantages may be, can depend solely and alone on its natural advantages to become a great seaport. It must be prepared to furnish facilities at least equal to those supplied by nearby ports, serving practically the same territory, for the accommodation of its shipping to enable it not only to retain it, but to permit of its expansion as well.

If both banks of the Willamette River and if Ross Island, in the upper harbor, and Swan Island, in the lower harbor, be included, the water frontage within the city limits is about 25 miles. Of this about 15 miles is considered as available for deep-water shipping, as the work of providing the necessary depth to the docks on this frontage is excessive neither in the amount of material to be moved nor in its cost. The material to be excavated is readily handled by suction dredges, as there is an entire absence of rock and boulders in the harbor.

If the lower portion of the river to its mouth be included, the frontage available for deep-sea vessels becomes 25 miles, so that greatly increased dockage facilities can be readily supplied when the shipping interests of the port demand additional berthing space. The frontage mentioned above is based on quay construction which will, naturally, be greatly increased by pier and slip construction, which can be used and is contemplated on a considerable portion of the port's harbor front.

The city has already developed, by private interests, a river frontage over five miles in length which is now used by vessels ranging from the small river boat and coasters up to large ocean-going tramp steamers. This development has taken place in a channel which averages in most places over 1000 feet in width.

The principal docks for ocean carriers have a depth of from 25 to 35 feet at low water. There are 22 well-constructed docks from which about 90 per cent of the deep-water shipping is done. These docks, varying in length from 300 to 800 feet, are all of the quay type construction. Many of these docks are equipped for handling freight economically, being supplied with derricks and electrical conveyors, and about 90 per cent of them are connected with rail transportation.

The capacity of the ocean docks varies from 10,000 tons to 30,000 tons, the latter being the Spokane, Portland & Seattle Railway dock, and the largest coal bunker has a storage capacity of 15,000 tons.

The port has two drydocks. The Port of Portland, in 1903, built a sectional floating drydock, which has a capacity for lifting a ship weighing 10,000 tons. The Oregon Dry Dock Company owns and operates a one-piece floating dock, having a length of 240 feet and dead-weight capacity of 3500 tons. Adjoining this drydock is a large, up-to-date boiler and machine shop and shipbuilding plant.

As a result of the pressing need of giving careful and comprehensive consideration of the question of harbor facilities, to ascertain the reasons for stationary or declining shipping at one point and the rapid growth of a nearby competing port, and the necessity of harbor development on modern lines to be prepared to handle the rapidly-increasing commerce of the country at large, nearly every port of consequence in this country, within the last few years, has made exhaustive studies of the conditions governing the more important ports, not only in the United States, but more particularly the great seaports of Europe. In the reports prepared and submitted by the individuals or commissions making these investigations, particular attention has been given to the various phases of ownership of commercial dock facilities, and to the powers of the management and administration of the most successful ports, those that have shown the greater increase in business and have kept their developments abreast of actual requirements.

The investigations have not taken into account the problem of design and construction of dock facilities, for they are governed largely by local conditions, but they have been nearly entirely confined to the question of ownership and the methods of organization and administration, which have enabled ports with even great physical handicaps to keep their place in the front rank of the great ports of the world.

The consensus of opinion of these investigations seems to lead to the conclusion that public ownership of commercial dock facilities is the wisest policy and leads to the most satisfactory results. These investigations further showed that where one authority controlled the operations of a port the results were most satisfactory and were marked by progress and expansion of business, and that the bonding and other financial powers of the port authority should not be mixed with the general finances of the city. Experience has shown that such a course would greatly hamper and retard the work.

For several years the subject of public docks has occupied the attention of this city, and the question was brought to definite issue when, in November, 1910, an amendment to the city charter was adopted by the people, creating a department of public docks, with authority to issue and sell bonds up to $2,500,000. This charter amendment provides that this department shall be administered by a commission consisting of five members, who shall be appointed by the Mayor.

The Commission of Public Docks was organized in December, 1910, and is now composed of the following members: F. W. Mulkey, chairman; C. B. Moores, Ben Selling, Dan Kellaher and George M. Cornwall, who serve without salary or compensation of any nature.

The powers of the commission are laid down on very broad lines. Briefly stated, the specific duties and powers delegated to it by this amendment are:

1. To prepare a comprehensive plan for the reconstruction of the harbor front for the needs of commerce and shipping. The commission may modify such plan from time to time as the requirements of commerce and shipping and the advance of knowledge and information on the subject may suggest.

2. To provide for publicly-owned docks of such number and character and on such plans as it may deem feasible and proper.

3. To purchase or acquire by condemnation such lands as may be necessary for use in construction of any publicly-owned docks or any other structure.

4. To have exclusive government and control of the entire waterfront of the city not owned by it.

5. To regulate the building, repairing, etc., of all structures on the city's waterfront.

7. To establish, regulate and alter dockage, wharfage and other rates on all publicly owned docks.

Since its organization the commission has proceeded with due caution and deliberation in its work, and has given necessary time to study and preparation, fully realizing that the successful prosecution and completion of this important work it was created to initiate and carry out depend in a very great measure on getting started right.

Upon the recommendation of the chairman of the commission, who spent considerable time on the Atlantic seaboard making investigations of various harbors, the commission formulated the policy to be followed in its future work, and engaged a board of consultation of prominent engineers to prepare a comprehensive plan for the reconstruction of the city's harbor front.

These engineers rendered their report late in April of this year, and the commission has adopted their recommendations for the sites and the construction units which are to be provided with the $2,500,000 now available.

The commission has taken steps to acquire these sites by process of condemnation and has had plans and specifications prepared for the public docks and their steel sheds, so that everything is in readiness to proceed with the letting of contracts and commence the construction as soon as the suits now filed to acquire the properties desired are disposed of.

The dock facilities approved by the Commission of Public Docks, which are to be provided with the funds now available, as soon as the sites are acquired, will include the following:

1. Dock No. 1, west side of the river, between Fourteenth and Seventeenth, east of North Front street, adjoins the Spokane, Portland & Seattle Railway Company's dock on the north. It will have a frontage on the harbor lines of 1013 feet, and is primarily designed for coastwise and ocean vessels of the largest type, but at the same time provision has been made for the convenient handling of freight from and to river crafts, whose importance is recognized as mediums at all docks for the assembling of outbound freight and for the distribution of cargoes received from ocean ships.

For this reason 300 feet of this dock is a two-level dock, the northerly 713 feet being a single level structure. A high level dock of 1310 feet in length is thus provided for large steamers, yet affording berthing space for one or two river boats.

The upper dock has ample space for storage of 7200 tons and the lower level of 2400 tons, so that a total of 9600 tons of freight, if necessary, may be temporarily stored in transit.

On the basis of tonnage handled at the average rate of 250 tons per linear foot of dock per annum, the maximum capacity of this dock would be about 250,000 tons per annum.

In connection with this dock installation, there will be ultimately constructed four fireproof, reinforced concrete warehouses — only one will be constructed with the funds now available—each six stories in height. The capacity of the four warehouses is figured at 166,800 tons, and that of warehouse No. 2, to be provided now, about 40,000 tons.

2. Dock No. 2—On the east side of the river, between East Washington and East Oak streets and East Water street and the harbor lines.

This installation is designed to serve the two immediate needs of the East Side merchants and shippers; first, a dock at which river boats can conveniently discharge or receive freight; second, wharfage facilities sufficiently ample to permit of loading or unloading of any ship now entering the harbor of Portland.

This dock will have a frontage of 526 feet and will have two levels throughout its entire length, with an estimated storage capacity in transit of about 6000 tons.

In the rear of this dock there will be constructed a one-story reinforced concrete warehouse, with a storage capacity of from 10,000 to 20,000 tons of freight, depending on the kind and height to which the commodities can be tiered. The foundation for this warehouse will be constructed to take five additional stories.

Both docks will have ample connection with all railroads entering the city, and a proposed public belt line railroad will later connect all public docks on both sides of the river.

These docks will be of fireproof construction, and sheds of steel and the warehouses of reinforced concrete. The docks, as well as the warehouses, will be provided with efficient sprinkler systems, and the entire construction in all its details designed to comply with the requirements of fire insurance companies to insure their lowest rates.

3. Coal dock.—Below the city bridges it is proposed to construct, with present funds, a coal dock with a storage capacity of some 1200 tons, with provision made for doubling or trebling the capacity, and four coaling barges, each of 600 tons capacity. With 800 tons that can be stored in cars on the coal dock, the Dock Commission can then keep on hand about 4000 tons of coal at this dock.

4. Minor improvements — These include the construction of a motor-boat landing at the foot of Stark street, floating derrick and other necessary auxiliaries of the port.

Under the comprehensive plan prepared by the board of consultation, it is proposed to continue the port development in successive stages on a schedule based upon the growth of Portland under present conditions, as bonding authority is obtained.

As the Commission of Public Docks has not yet made public the proposed sites for future improvements on the harbor front, it is not possible in this article to go into details as to locations, etc., but the following outline of the additional port facilities contemplated will give a general idea of the future public docks which the commission hopes to provide.

Following the immediate improvements which will be constructed under the present appropriation of $2,500,000, and extending over a period of years, the plan contemplates an additional expenditure of about $25,000,000, which sum covers the cost of sites as well as construction, including a public belt-line railroad. The expenditure of this amount is expected to provide public docks and piers, with unloading tracks and warehouses, all united by a public belt-line railroad to form one correlated and well-organized terminal port, with berthing facilities of some 32,000 linear feet—over six miles—of docks and piers. In the comprehensive plan the waterfront improvements proposed, both for immediate and future construction, have been divided between both sides of the river, with a common trans-shipping terminal, ample to meet the needs of the harbor for many years to come.

In this plan have been worked out the possibilities for the most improved type of grain service, and a site provided for grain elevators where grain brought by railroads is delivered from service tracks. Grain shipments by water, such as undoubtedly will be received when the upper reaches of the Columbia River are improved, will be received in the rear of the grain elevators, there picked up by the usual suction pipes and delivered by overhead conveyor to the elevator plant. Outward shipments of grain after having been cleaned, separated, sorted, etc., in the elevator, will be delivered by belt conveyor to the piers assigned to this class of freight.

Provision has also been made for the shipment of lumber from timber areas not on streams or rivers affording logging transportation to tide water, and a considerable storage area, which may be readily increased, set aside for that purpose. One or two piers adjacent to the lumber-storage area can be utilized in the cargo shipment of such lumber.

Another important feature should also be mentioned in connection with these improvements. A location has been provided for a large coal-handling plant and coal yard, from which direct delivery to large ships is obtained. A space is reserved for ground storage of coal to be subsequently delivered in coal barges for distribution to any point in the harbor.

The completed improvements contemplate also a freight assembling, switching and storage yard with a capacity of 1500 cars, and the public belt line already referred to will connect all the public dock and pier units in the harbor with each other and with the trackage and terminal yards of the railroads.

In all future improvements included in the comprehensive plan, the same class of construction is provided for as outlined for the public docks and warehouses now to be constructed, that is, fireproof construction, with such mechanical freight-handling devices as the service to which the improvements are assigned may demand.

BANK CLEARINGS CLIMB.

Year by year there has been a steady advance in bank clearings, as reported by the Portland Clearing-House Association. From 1900 to the present time every year has shown a substantial gain over the preceding year, with the exception of 1908, when there was a slight falling off, due to the unsettled conditions arising all over the country in the Fall of 1907. The past year shows a gain of more than $35,000,000 over 1911, and the past three years have recorded clearings far in advance of any previous year. The total clearings, by years, follow, the 1912 figures including an estimate for December:

1900	$106,918,027.48
1904	189,051,469.92
1905	228,402,712.69
1906	281,170,796.26
1907	350,888,630.97
1908	310,656,512.69
1909	391,028,890.61
1910	517,171,869.97
1911	557,464,848.17
1912	592,000,000.00

BUILDING EXPENDITURES HEAVY.

New buildings erected in Portland within the past three years have involved an expenditure of approximately $55,000,000. In the year just closed the total outlay represented by building permits issued is below the remarkably large figures of 1910 and 1911, but this holds true in nearly all American cities. The more than $15,000,000 for 1912 is considered an excellent record. The number of permits issued and their value, by years, since 1900 follow:

	Number.	Amount.
1900	392	$ 944,985
1901	745	1,529,143
1902	1,244	2,730,660
1903	1,628	4,281,056
1904	1,720	4,029,225
1905	2,318	4,183,368
1906	3,166	6,902,022
1907	3,890	9,446,982
1908	4,849	10,405,151
1909	4,739	12,481,280
1910	6,523	20,886,202
1911	7,687	19,152,370
1912	10,901	15,019,647

OREGON TO STAND IN FOREFRONT OF STATES AT PANAMA-PACIFIC EXPOSITION

Appropriation of $500,000 to Make Strong Showing at San Francisco Fair Is Recommended as Sound Investment—Building Plans Are Considered.

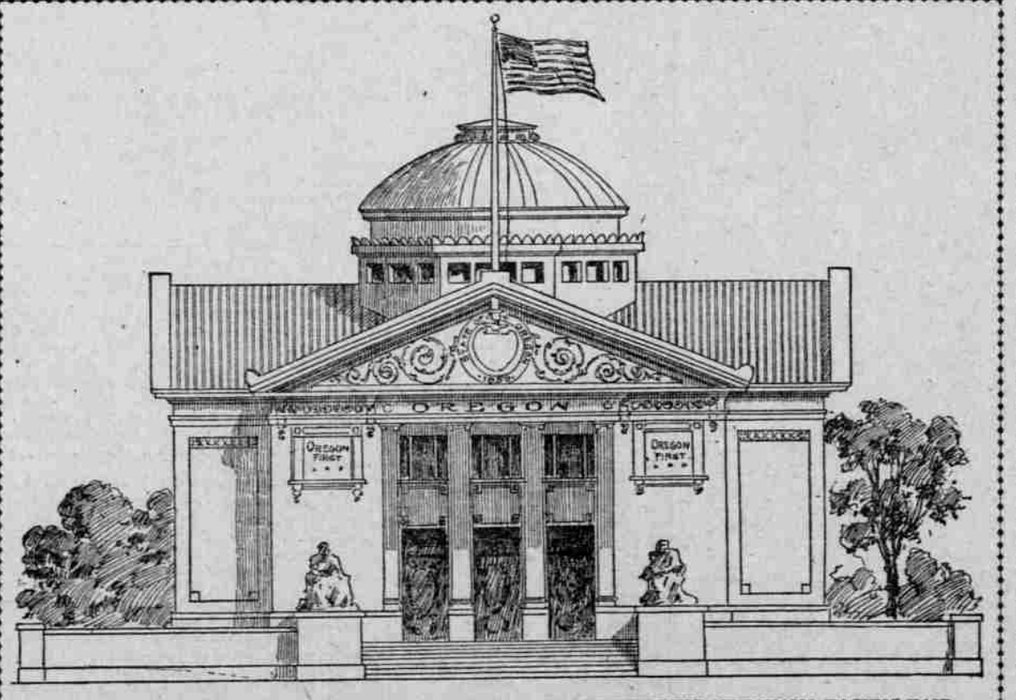
By Julius L. Meier, Chairman Panama-Pacific International Exposition Commission From Oregon.

TWO years and two months hence Oregon must have an open-house home at the Panama-Pacific International Exposition in San Francisco. That house must be one of the most effective structures in the long list of foreign and state edifices. As the millions of people who will pass through the great grounds of the exposition view this structure, they must get a concrete suggestion from it of Oregon, the state of incomparable resources, the future home of a great people.

I would have that Oregon structure overlooking the waters of the Golden Gate an eloquent though silent exposition of a studendous forest, which carries a manufacturing potential wealth of $5,000,000,000. It should also represent 6,000,000 horsepower of latent energy in tumbling streams, which must soon be harnessed to the greatest electrical transportation systems of the world, the greatest electrical reduction plants of the world, and the greatest electrically-driven factories that time will ever record. In addition to this suggestion of industrial wealth, I would have the Oregon home building at San Francisco tell the world that here we have 20,000,000 to 30,000,000 acres of land which must soon be cultivated; that on this land will soon be found the world's best livestock and the world's dairy yields; that dry farming and irrigation, coupled with human energy, will soon make this land yield cereals, fruit and vegetables which the world will study as highest examples of perfection.

If there is any citizen of Oregon who can suggest to the State Commission what type of building will convey these thoughts to the people in most convincing form, we will be profoundly grateful for the idea. We want a structure and exhibits which will fully and truly depict Oregon. We have so much to present, such varied resources and wealth, that our problem is to figure out a building sufficiently broad, expressive and accurate.

Many Oregonians are set in the purpose of erecting at San Francisco a structure of giant fir logs, on the style of the forestry building of Lewis and Clark Exposition. There is a strength and impressiveness in this type which cannot be denied. It is unique in all architectural orders. Possible only where Douglas fir reaches perfection, where the mximum in lumber yield to the acre is found, some of the Commission have thought a giant structure of this type would command universal attention, while conveying in rough form the thought of Oregon's superlative natural resources as they now exist in undeveloped state.



PRELIMINARY DRAWING BY STATE ARCHITECT OF OREGON BUILDING AT PANAMA-PACIFIC FAIR.

Other thoughts have been suggested, which the Commission has studied carefully. W. C. Knighton, State Architect, is busy preparing suggestions that occur to him. Many officials have been pondering over the subject, all profoundly impressed with the fact that Oregon's highest opportunity in advertising her resources to the world will come with the Panama-Pacific Exposition, and that the state must work out a superb structure, unique and alone in its strength, capable of housing the tens of thousands of Oregonians who visit the exposition, and sufficiently capacious to extend a good host's cheer to the throngs of visitors who will pass through the structure daily for nine months of the year 1915.

A great log structure, more stupendous in its lines than any other attempted, may be finally decided upon. If so, Oregon must do the work with a master hand. And into this symbol of the richest forest wealth ever given any commonwealth must be put in effective form the suggestion of the other wealth which in Oregon awaits the developing hand of man. How we can do this is the state's problem, as well as ours. We must have the aid of every man and woman. We have started into this work on the principle of "Oregon First," and that pace must be maintained. We owe it to California, which has undertaken the most courageous duty in behalf of the West any community of like population and wealth ever attempted. Oregon is California's nearest and most intimate sister. We would be unappreciative of heroic energy if we did not stand by the southern state to a man, giving every aid within our power and contributing to the work on the sale which California has established by her unprecedented pledge of funds.

But Oregon owes to herself participation in a high-class manner, a duty which is all-powerful when studied as a strict business proposition. Oregon's supreme opportunity will react if not seized at the right moment. It is the tide that must be taken at the flood. The world will have its eyes upon the Pacific Coast from September, 1913, to the close of 1915. This wealth nature has placed for man will be sought then. No more powerful guide to it can be provided than the exposition. The people of every country and race will go there to see what the Pacific Coast has, what it promises for them in commerce, or as a new home, as a manufacturing center, or as the scene for rest and recreation. In proportion to the demonstration made will the Pacific Coast be judged. If Oregon presents its worth in a manner that cannot be gainsaid, Oregon will get its due percentage of development influence. But if Oregon is overshadowed at the exposition, while the other Coast states make superb showings, all we say and claim for Oregon will be connected with some handicap, some limitation which the Oregonians themselves are afraid to reveal.

The preliminary work of the Commission is about finished. With one of the largest excursions ever taken from any state on a similar mission, and led by our Governor, we selected the site for the Oregon building early in the year. This was the first site selected by any state or foreign country, and is the choice of the entire area for this class of buildings. We have assured the exposition management that our people are keenly alive to their responsibilities in connection with the exposition work. We have appealed to every district of the entire state, to every man and woman, to stand with the Governor and the commission that directs the finishing work of the Oregon Commission. We have also been assured of the most striking exhibits, the most representative and convincing groups of products, that has ever been gathered anywhere.

At the forthcoming session of the Legislature this month the funds for construction work will have to be provided. It is here that the people of the state will fix the scope of their participation, of their work at the exposition and of the influence which the Panama-Pacific Exposition must have on the future of Oregon. Our commission has assumed that this allowance of funds would be all that was needed to do Oregon's part, with excellence but without waste. That we should have, must have. It is for the legislators to say what can be properly expended at the exposition, and in deciding this point we have full confidence in their judgment.

Washington, our neighbor on the north, is working on a $500,000 basis. New York, most distant from California, has already appropriated $700,000, and is expected to put in much more before her great plan is fully worked out. Japan will install a magnificent building and exhibits. The insular government of the Philippines has appropriated $200,000 already. The pace set by states and foreign countries is fast, and it would be impractical for Oregon to think of a less appropriation than $500,000. Whatever portion of this sum might be needed would be used, but no more. But the state's representatives should have a comfortable latitude, by means of which they could do what is necessary to present the great State of Oregon to the world as one of the richest in potential wealth that can be found in all the world.

Corn 11 Feet 4 Inches High.

A stalk of corn measuring 11 feet, 4 inches from roots to the top is the unusual specimen of the product of Douglas County soil on exhibition at the Review office today. The corn was grown in elevated clay soil on F. M. Farns' farm at Edenbower.—Roseburg Review.