

channel, such as clearing out obstructions caused by floods, or from other causes, and to such operations where it might prove inexpedient to await the erection and operation of permanent works. The money received from taxes could also be used for doing permanent work where, in case the funds on hand were insufficient to meet the expense which the plan of making the improvements might incur.

The power and authority given to the corporation was vested in a board of commissioners. Originally the board consisted of the following citizens of Portland: W. S. Ladd, Henry Failing, C. H. Lewis, James Steel, T. M. Richardson, John McCracken, G. B. Markle, E. D. McKee, John E. Lombard, Ellis G. Hughes, Cyrus Buckman, David Haffey, J. B. Joseph, William M. Killingsworth and John H. Steffen, W. S. Ladd and Cyrus Buckman, members of the board, have died since that time, and their places have been filled by the appointment of C. E. Ladd and A. W. O'Connell. The president of the board at the present time is John McCracken, J. C. Flanders is vice-president, C. E. Ladd is treasurer and Charles Rockwell is secretary. A number of the board receives, either directly or indirectly, any salary or other compensation for his services. The board is strictly non-partisan in its character, and it is entirely removed from the influence of politics.

The operations of the Port of Portland have been in harmony with the work of the United States engineers on the lower Willamette and Columbia rivers. To a certain extent this work of Portland has been auxiliary to the work of the government. Permission was granted to the board by the secretary of war to construct the dikes and to dredge in accordance with the plan adopted for carrying on this work by the government. Work was first commenced by the commission in the summer of 1891. After advertising, contracts for constructing dikes at St. Johns and Postville bars in the Willamette river and at Walker's island, Snag Island and Cathlamet bay in the Columbia river were let to the lowest bidders. These dikes were constructed by driving a double row of piles into the bed of the river, the rows being from eight to ten feet apart. A heavy matting of brush fascines was placed between these rows of piles and on this matting was dumped a layer of rock. The matting prevents the rock from settling deeply into the bed of the river. The alternate layers of fascines and rock fill the space between the piles which project about two feet above the water at low water mark. A last layer of rock rounds up the top.

In the construction of these dikes 467,449 linear feet of piling, 55,912 cords of fascines, 29,764 tons of rock and 1,457,731 feet of lumber were consumed. The following table shows the total length and cost of each of these dikes:

DIKE CONSTRUCTION.	Total Length Linear Feet.	Cost of Dike.
At St. Johns, Willamette river.....	4,500	\$1,445.50
At Postville bar, Willamette river.....	6,200	48,362.95
At Walker's island, Columbia river.....	13,000	115,750.20
At Snag Island, Columbia river.....	15,000	166,250.21
Engineering expenses.....		9,151.19
Total for dikes.....	48,700	\$330,859.95

The dredging necessary in the channel was not done by contract. The city dredge was employed in this work and the work of dredging was all done under the immediate direction of the Port of Portland. During the past year the only money spent by the Port of Portland was \$923, which represented the cost of dredging the channel at Swan Island in the Willamette river, and at Walker's island in the Columbia river.

The following statement shows the extent of dredging operations done by the

PARADE GROUNDS, FORT CASB, AND JETTY: CAPE DISAPPOINTMENT IN DISTANCE	Cubic Yards Dredged.
Port of Portland commission to December 31, 1894:	
In the Willamette river.....	146,181
At and above Swan Island.....	40,216
At Postville bar.....	40,216
In the Columbia river.....	5,325
At the mouth of the Willamette.....	22,620
At St. Helens.....	22,620
At Martin's island.....	22,620
At Walker's island.....	22,620
In Cathlamet bay.....	22,620
Total dredging.....	330,859

The cost of dredging and dike construction by the commission has been very much less than the estimate of Major Handbury provided for. More dikes have also been constructed by the Port of Portland than were provided for in the plan of the government engineers. This attests the business-like methods adopted by the commission for prosecuting this work.

The following is a statement showing the total funds procured by the Port of Portland commission up to the present time:

RECEIPTS:	Amount.
Roads.....	\$30,000.00
Net premium realized on securities.....	9,720.00
Total cost of dikes.....	137,125.71
Total.....	\$49,720.00
The total expenditure to December 1, 1894, by the commission, is shown by the following statement:	
Total cost of dredging, including repairs on dredges.....	\$42,300.00
Total cost of dikes.....	137,125.71
Interest on bonds and temporary loans.....	2,979.77
General expenses, including attorney's fees, etc.....	5,000.19
Total expenditure.....	\$187,405.67
Balance in the treasury.....	\$137,684.33

The commission still has \$136,000 of bonds to dispose of. This is in addition to the proceeds from the regular tax.

As the result of the work of the Port of Portland commission and the government engineers, no lightening is necessary for vessels operating between Portland and the mouth of the Columbia river. Ships of a draft of 22 feet are towed over the entire distance without encountering any obstructions. But little additional dredging will be necessary to insure a safe channel from Portland to the sea, as the construction of the dikes has greatly increased the current in the channel over the shoals, which will result in cutting this channel out by natural erosion to the required depth. The waters of the Willamette and Columbia remain at their lowest stages for but a short time during the year, and even at these low stages the tide in the river adds three feet to the depth during its height. There is today, between Portland and the sea, practically a channel of 35 feet at the lowest stage of water.

It is expected that Congress will make the necessary appropriations for finishing the work inaugurated by the Port of Portland. The improvement of the river channel from Portland to the sea is a work in which all of Oregon and a large part of Washington are interested. It is hoped that the good results accomplished by the expenditure already made by the Port of Portland will secure agreement to finish a work that promises such signal benefits to nearly all portions of the Pacific Northwest.

GENEROUS PORTLAND

HOSPITALS AND HOMES FOR THE DEPENDENT MAINTAINED HERE. The Liberal Support Given These Institutions and the Effective Work They Are Doing.

PORTLAND has never been chary in responding to appeals for help from those who were in distress. The city has been forced to depend on others for their support. The city has been forced to depend on others for their support. The city has been forced to depend on others for their support.

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tation on the part of the board of directors. For two years past, however, the institution has been in receipt of \$200 annually appropriated for this purpose by the state legislature. The home is now out of debt. Since the institution was started, there have been 12 adoptions from the inmates by families in good standing. The management is in the hands of prominent ladies of Portland, and the effective results which have been obtained have been due directly to the unselfish services these ladies have devoted to the care of the institution.

GOOD SAMARITAN HOSPITAL.

One of the most prominent hospitals of the coast is that known as the Good Samaritan in Portland. This institution occupies two double blocks between Twenty-second, Twenty-third, Lovejoy and Northrup streets, in the western part of the city. The large hospital building, with the broad and beautiful lawn surrounding it, occupies the eastern half of the block. On a part of the northern double block, on the corner of the largest and best appointed quarters for the convalescing patients.

In the erection of the building particular attention was paid to the question of sanitation. The building is lighted throughout by electricity. The present structure is a part of the building as it will be when fully completed according to the original plans. It was the aim of the projectors of this enterprise to make this one of the largest and best appointed hospitals on the coast. Since the hospital was first opened, in 1890, it has cared for over 500 patients. Twelve per cent of this number were treated gratuitously.

In connection with the hospital there is maintained a fully equipped home for the deaconesses, who are under the immediate

control of the Woman's Home Missionary Society of the Methodist Episcopal church. This is a fine building, and the school for nurses, and all nursing in the hospital is in charge of the carefully trained deaconesses.

The Portland Hospital was organized in 1887 as the result of the personal efforts of Rev. H. D. Brown. This gentleman was made chairman of the preliminary conferences. Dr. W. H. Watkins was elected to the office of president. The first meeting of the incorporated board of trustees, of whom the late W. S. Ladd was a member, was held December 12, 1887, in the parlors of Ladd & Tilton's bank.

The present site of the hospital was purchased by the board of trustees in 1887, and the building was first opened in August, 1888. The present site of the hospital was purchased by the board of trustees in 1887, and the building was first opened in August, 1888.

The hospital now has endowments aggregating \$2,000. For the period of 14 years immediately following its establishment here, the hospital was in charge of Bishop Morris, but upon his death in 1902, it passed into the hands of an incorporated board of trustees, which is composed of some of the best known and most skillful practitioners in the city.

ST. VINCENT'S HOSPITAL.

The structure occupied by this creditable institution is a splendid new building which occupies an attractive site high up on the hillside immediately west of the main part of the city. It is just west of

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every part of the work of building. The old building occupied by the hospital stood on Twelfth street, between Marshall and Northrup. This hospital was founded about 30 years ago. From the time that it was first started it has been remarkably successful under the management of the sisters. With all its numerous additions, the old building has since proved inadequate to meet the requirements of the hospital, and it was the steady but rapid increase of the business which made the demand for the erection of the present modern and complete building an imperative one.

THE PORTLAND HOSPITAL.

The Portland, sometimes known as the Sunnyside hospital, occupies a fine brick building located on East Thirtieth street, between the Base Line road and East Alder street. The location from a sanitary point of view is one of the best in the city. The building is in every respect an attractive one. The building is surrounded by spacious and well-kept grounds, which afford the most inviting of surroundings for the convalescing patients.

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treat county patients at the nominal charge of 50 cents a day each. This is less than the actual cost, which is treated at the poor farm, and it insures the care which every sick people ought to receive.

OTHER CHARITABLE INSTITUTIONS.

In addition to the above there are several other excellent homes and institutions of a semi-charitable nature in Portland. Among the most important of these is the Good Shepherd Maternal Home, which is located on East Twelfth street, between Hoyt and Irving. Mother Mary of St. Alphonsus is the superioress of the Home. It is well conducted and is doing a good work among the masses to whom its shelter and support especially appeal.

The Boys' and Girls' Aid Society own a home on Hawthorne avenue, at the northeast corner of East Twenty-seventh street. This society was incorporated in July, 1885, with the following officers: H. W. Corbett, president; F. E. Beach, secretary; Colonel L. L. Hawkins, treasurer; and William M. Killingsworth, secretary.

The Refuge Home for Women, at 229 East Second street, is under the management of a number of prominent ladies of the city. The result of the management of the Home has been highly satisfactory.

The United States Marine hospital service has a ward at St. Vincent's hospital, where patients from the navy are treated by the government's physician.

There are still a few other similar institutions in the city, but those mentioned above are the principal ones. The importance of the city, and it is the important work they are doing that has called for the publication of the present article.

NO. 2 IS ALL RIGHT.

No Serious Damage to Lower Reservoir at Mount Labor.

Rumors have been afloat concerning the lower reservoir at Mount Labor, since the water was let out of it, to the effect that the brick lining on the sides and bottom had been disrupted by the enormous pressure to which it has been subjected. It was stated that the bottom had actually fallen out of it, and the reservoir was irreparably damaged. Examination by an Oregonian reporter demonstrates these reports to be greatly exaggerated. The appearance of the reservoir, after it had been emptied, might mislead the casual observer, but the bottom and sides were, of course, enormous. In the bottom at the east end a number of depressions were made by the pressure, some deep and others superficial, but the brick lining was broken in but a few places, as any one can see by making a close examination. In excavating for the reservoir, the plans were changed, so it is not five feet as deep as was intended. The water level is not to the entire depth, and in doing so, a great many bowlders were blasted out and the holes filled up. It also became necessary to fill the east end so as to bring it up to a level with the other end, and to correspond with the change in the plans. The depressions in the bottom all appear in this part of the reservoir, where the bowlders were blasted out. In the southeast corner, where the bottom rests on made ground, and where trouble was feared, the bottom is perfectly sound and level. The trouble is confined to the places where the stones were blasted out.

On the south side of the reservoir, which is wholly of made ground, there is not the slightest depression, and the brick is just as it was laid. The north wall shows a number of small depressions, but no breaks or cracks appear. The water level is not to the entire depth, and in doing so, a great many bowlders were blasted out and the holes filled up. It also became necessary to fill the east end so as to bring it up to a level with the other end, and to correspond with the change in the plans.

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