SANTIAM SURVEY

Stream Has an Available Energy of More Than One Hundred Thousand Horse-power.

UNIVERSITY ISSUES INTERESTING PAPER

Professor McAllister Suggests That Electrical Energy Be Used More for Heating.

The third industrial bulletin issued by the University of Oregon is in circulation with a November date line affixed. In this treatise Professor E. H. McAllister, dean of the engineering department of the university, details the result of a survey of the Santiam river made by the faculty and students with the object of determining the available power in that stream.

The survey extended a distance of 24 miles up the stream from Mill City. In this stretch of 24 miles the river drops 900 feet, carrying at either extreme and the middle of the survey, the following volume of water, commencing at the upper point: Detroit 1,228 cubic feet a second. Blowout 1,878 cubic feet a second and Mill City 2,191 oubic feet a second. As a more readily understood gauge, the reader is advised to multiply these figures by 56 to determine the number of miners' inches carried, which gives the following results in the order named before, 61,400, 24,959 and 109,550 inches. The measurements were made in the latter part part of June and do not give the mean low water flow, but are accepted as an average for the year. With this volume of water and the drop of 900 feet, the engineer estimates a total of 175,000 horsepower continuously exercted. All of this is not held available, but the stream is believed to offer 106,000 horsepower net in the 24-mile stretch measured. Opportunities for utilizing the power are very good, if dams are used to restrain the current, for the channel as a rule is in a narrow, rocky gorge.

After noting the possibilities of this

row, rocky gorge.

After noting the possibilities of this splendid stream for the industries of Marion and Linn counties, Professor Mo-Allister makes the following com-Allister makes the following commentary on a relatively new use to which electrical energy could be applied: "The desirability of electric heating along with electric lighting has long been recognized, but so far the appliances seem unsatisfactory. Here is the possibility of an enormous consumption of electricity and genuine progress in our home life. Considering the vastness of the possible market, this matter appears not to have received the attention which it deserves, and it

sttention which it deserves, and it would seem desirable for those financially interested to stimulate progress. Our water power can give us cheap electricity in our homes; let our electricians perfect economical and satisfactory heating appliances."

The Santiam mining district is above the survey, but is offered abundant power by the same stream for all mining or milling plants that will be erected there. Two plants using electric drills are now in use. The Oregon Central & Eastern railway extends up the stream to Idanha. Rich agricultural districts adjoin toward the Willamette, offering a market for electrical energy when an a market for electrical energy when an effort is made to generate it in large quantity. One dam was begun for this purpose at Niagara, but work there has been discontinued.

CORNUCOPIA MAY BE REDEEMED IN A YEAR

(Special Dispatch to The Journal.) Baker City, Or., Dec. 2.—Redemption of the real and personal property of the Cornucopia Mines of Oregon company has become the topic of general interest here, following the earlier question of who was likely to bid the mines in. Attorney W. F. Butcher's bids for real estate and personal property aggregate

purchasers can do nothing toward opera-tion, nor would they care to make an ex-penditure save what was necessary to preserve the property. Negotiations are pending for a transfer, and out of these pending for a transfer, and out of these
it is believed that something material
will develop, perhaps long before the
time for redemption expires. Those
familiar with the value of the Cornucopia mines do not think that either
John E Searles or H. H. Rogers will permit the property to pass permanently for \$41,088, unless their financial stress

FINAL REPORT OF RECEIVER APPROVED

GRANRY STOCK ADVANCES.

Granby mining stock is advancing rapidly. In three weeks it climbed from \$2.50 to \$5.67 a share, and there is an upward tendency. Sales are reported heavy in Boston, the why and wherefore being velled. No material gain was made at the time of the annual report showing a profit of \$250,000, and the present flurry is inexplicable on other than the basis of extraordinary developments in the mine which are not generally known to the public.

ANOTHER DRAINAGE TUNNEL.

Cripple Creek district, Colorado, con-templates a second drainage tunnel, tapping the water 800 feet deeper than the present El Paso tunnel. Plans for the new tunnel are said to have been formulated by the mine owners very

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Attorney W. F. Butcher's bids for real estate and personal property aggregate \$41,086.60. Whoever takes the mines will have to pay this amount first, and only the owner is given the privilege of redeeming.

Under provision of the mining laws 60 days is given for redemption of property to which patent has not been issued by the federal government, and one year is provided for redemption of patented real estate. There are 29 claims in the Cornucopia group, most all of which are said to be patented, and the equipment would doubtless be regarded fixtures going with the realty. Thus it will be seen that the time for redemption property doubt and the property covers a considerable period, and in the interim the purchasers can do nothing toward operation, nor would they care to make an ex-

E. W. Parker, of the United States geological survey, in his report on the production of coke, gas, tar and ammonia for 1903 says that 5.43,533 tons of coke The 528 companies to following resolution was adopted:

Reselved, That the Council of the City of Portland, Oregon, deems it expedient and period, from which was realized 3.941,-223 tons of coke. The 528 companies of cole the council of the City of Portland, Oregon, deems it expedient and period, from which was realized 3.941,-223 tons of coke. The 528 companies of cole feet of gas, 52.964,593 gallons of colal tar and 64.396,662 gallons of ammonia liquor or the equivalent of 17.473,755 pounds of anhydrous ammonia. The manufacture of coke by-products as work of more recent date, and the retort ovens for this work are growing in number.

According to statistics gathered by the United States geological survey the average price charged for artificial coaggas throughout the nation is 97 cents per 1.006 cubic feet. The price ring far lower than this in some of the big coal producing states, where the gas is a by-product is a mere incident to the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The price in cities where there is no natural gas, and the coking business. The pr (Special Dispatch to The Journal.)

Baker City, Or., Dec. 2.—Receiver John Thomsen of the Red Boy mine, has filed his final report of the disbursement of funds from the sale of the property to the time of reorganisation. The report was approved by Judge Eakin. The per 1.000 cubic feet. The price runs far lower than this in some of the big coal producing states, where the gas as when the receivership was finally wound up they would proceed to put the mine in operation again. It is understood on good authority that the capital necessary for these operations has been subscribed.

Der.

According to statistics gathered by the United States geological survey the average price charged for artificial coal gas throughout the nation is 97 cents per 1.000 cubic feet. The price runs far lower than this in some of the big coal producing states, where the gas as a by-product is a mere incident to the coking business. The price in cities where there is no natural gas, and the coking business is an incident to the manufacture of gas for illuminating purposes, is materially above this average of 27 cents. Portland being one of

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cost for the improvement of said Shaver street is \$3.815.00.

The plans, specifications and estimates of the City Englaser for the improvement of said Shaver street are hereby adopted.

Resolved, That the Auditor of the City of Portland be and he is hereby directed to give notice of the proposed improvement of said street as provided by the city charter.

Remonstrances against the above improvement may be filed in writing with the undersigned within 20 days from the date of the first publication of this notice.

By order of the Council.

THOS. C. DEVLIN.

Auditor of the City of Portland.

Portland, Oregon, November 28, 1904.

PROPOSED IMPROVEMENT OF MORRIS

CLAIRVOYANT



\$10.00 Complete

parallel with the west line of East Twentythird street.

The Engineer's estimate of the probable total
cost for the improvement of said Tenino avenue is \$7.547.00.

The plars, specifications and estimates of the
City Engineer for the improvement of said
Tenino avenue are hereby adopted.

Besoived, That the Auditor of the City of
Portland be and he is hereby directed to give
notice of the proposed improvement of said
avenue as provided by the city charter.

Remonstrances against the above improvement may be filed in writing with the underaigned within 20 days from the date of the
Erst publication of this notice.

By order of the Council.

THOS. C. DEVLIN.

Auditor of the City of Portland.

Protland. Oregon, November 26, 1904.

PROPOSED IMPROVEMENT OF PRESCOTT STREET.

PROPOSED IMPROVEMENT OF PRESCOTT STREET.

Notice is hereby given that at the meeting of the Council of the City of Portland, Oregon, held on the 16th day of November, 1904, the following resolution was adopted:

Resolved, That the Council of the City of Portland, Oregon, deems it expedient and proposes to improve Prescott street from the west line of East Twelfth street to the east line of East Fourteenth street, in the following manner, to-wit:

First.—By grading the street full width with full intersections to the grade as shown by the stakes set by the City Engineer.

Second.—By constructing wooden aidewalks in accordance with the City Engineer's plans, specifications and estimates.

Third—By constructing crosswalks.

Said improvement to be made in accordance with the charter and ordinances of the City of Portland, and the plans, specifications and estimates of the City Engineer filed in the office of the Additor of the City of Portland on the 11th day of November, 1904, indorese: "City Engineer's plans and specifications for the limprovement of Prescott street from the west line of East Tourteenth street and the estimates of the work to be done and the probable total cost thereof."

The cost of said improvement to be assessed as provided by the city charter upon the property specially and pseculiarly benefited thorsby and which is hereby declared to be all the lots, parts of lots and parcels of hand lying between a line 100 feet north of and parallel with the north line of Frascott street and the east line of East Fourteenth street.

The Engineer's estimate of the probable total cost for the improvement of said Prescott street is \$211.00.

The plans, specifications and estimates of the City of Portland be and be is hereby directed to give notice of the proposed improvement of said Prescott street are breaty adopted.

Remotered to the improvement of and Prescott street are breaty adopted.

Remotered to the proposed improvement of said Prescott street are breaty adopted.

Remotered to the proposed improvement

inter.

Ald improvement to be made in accordance of the charter and ordinances of the City Portland and the plane, specifications and imites of the City Engineer filed in the cast line of Corbett street and the west line or of the Anditor of the City of Portland on the 17th day of November, 1864. In the cast line of Corbett street and the west line on the 17th day of November, 1864. In the cast line of Corbett street and the west line on the 17th day of November, 1864. In the cast line of Corbett street and the west line of Kally street. O. G. Gamman, Eight day

THE PROVENENT OF WILLIAMS OF US PROM THE NORTH LINE OF US STREET TO THE NORTH LINE

PROPOSED IMPROVEMENT OF NORTH

grade with gravel.

Third—By constructing artificial stone sidewalks.

Fourth—By laying artificial stone crosswalks four feet in width.

Fifth—By constructing stone gusters.

Baid improvement to be made in accerdance with the charter and ordinances of the City of Portland and the plans, specifications and astimates of the City Engineer filed in the office of the Auditor of the City of Portland on the 10th day of November, 1904, indersed: "City Engineer's plans and specifications for the improvement of the north half of Halsey street from the east line of East Fifteenth etreet to the west line of Holladay Park addition, and the estimates of the work to be done and the probable total coat thereof."

The cost of said improvement to be assessed as provided by the city charter upon the property specially and peculiarly benefited thereby and which is hereby declared to be all the lots, parts thereof and parcels of land lying between the north line of Halsey street and a line 100 feet north thereof and parallel thorewith and between the east line of Rest Fifteenth street and the west line of Holladay Park addition to Portland, Oregon.

The Engineer's estimate of the probable total cost for the improvement of and Halsey street is \$1.140.00.

The above improvement is to be classed as a gravel improvement of said Halsey street is \$1.140.00.

The above improvement before the expiration of such period.

The plans, specifications and estimates of the City Engineer's estimate of the property benefited by said improvement of said Halsey street are hereby adopted.

Resolved, That the Auditor of the City of Portland be and he is hereby directed to give notice of the proposed improvement of said street as provided by the city charter.

Remonstrance against the shove improvement may be filed in writing with the undersigned within 20 days from the date of the first publication of this notice.

By order of the Chuncil.

THOS. C. DEVLIN.

Auditor of the City of Portland.

Protland. Oregon. November 18, 1804.

PROPOSED IMPROVEMENT OF WILLIAMS
AVENUE FROM THE NORTH LIME OF
M'MILLEN STREET TO THE NORTH LIME
OF MORRIS STREET.

Notice is hereby given that at the meeting of the Council of the City of Portland, Oregon, held on the 18th day of November, 1904, the following resolution was adopted:
Resolved, That the Council of the City of Portland, Oregon, deems it expedient and proposes to improve William avenue from the north line of McMillen street to the north line of McMillen street to the north line of Mories street except that portlon of said street lying between a line 78 feet north of and parallel with the north line of Cherry street and a line 100 feet south of and parallel with the south line of Broadway and all portions of said street used by the Portland Consolidated Railway Company's right of way, in the following manues, to-wit:
Pirst-By grading the street full width with full intersections to the grade as shown by the stakes set by the City Ragineer.

Second—By constructing stone block header double new

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