GOOD FROM IRRIGATION

COLONEL R. W. MITCHELL GIVES VALUABLE STATISTICS.

Good Ronds and Irrigation Will Double Oregon's Resources-Yakima Ditch.

PORTLAND, Nov. 2 .- (To the Editor.)-There is probably no subject now attracting deserved attention more important than that of irrigation. It has a direct bearing upon the very existence and permanency of a vast region. At a time when it can be said that the arable lands of the Government are about gone the great question of the reclamation of the arid lands lying in what was known as the "Great American Desert" should receive careful examination. Irrigation has been practiced for cen-

turies, and right at our own doors. In our sister republic of Mexico there are examples of it which show great engineering skill and large expenditures. A measure-ment of the results cannot be made for the reason that the people who, centuries ago, engaged in irrigation have for some unknown reason become dwarfed in other pursuits, leaving behind them the ruins of once magnificent structures.

Irrigation in Oregon.

To probably no state in the Union is the nation of arid lands more vital than to Oregon, especially the portion lying between the Cascade Range and the Snake . Here the vast sugebrush plains for years appealed for reclamation, and still remain largely untouched, except in a very few instances. From a speculative standpoint, irrigation has a great attraction; the enhancement value following its successful operation is so great as to excite wonder. I know of no satisfactory explanation making clear why irrigation has not been more largely adopted in Eastern Oregon than The fact that the people inhabiting that tegion were originally not of the farming class, but were engaged in raising horses, sheep and cattle. There are, however, geveral notable examples of successful operation of irrigation east of the Cascade Mountains, but only in a half dozen instances have the full opportunities pre-sented been embraced. Our younger sister state, Washington, has set us an example which we should not overlook. The Yakima irrigation scheme is one of the most successful that has yet come under our notice, if we except the operations conducted by that thrifty sect, the Mor-mons, in Utah and Colorado. The trans-formation effected by irrigation wherever practiced is so marked as to challenge

The Yakima Ditch. Ten years ago that portion of what was

then known as Washington Territory, lying between the Columbia River and the Cascade Mountains, did not contain more than 690 inhabitants, 500 of whom were congregated at the town of Yakima, situated in a fertile but then poorly cultivated valley known as the Yakima Valley. On the south was the immense Yakima Indian Reservation, and on the north, with the exception of the valley surrounding the head waters of the Yakima River, the mountain ranges-broken spurs of the Cascades-presented no wel-come. About 1882 a Scotchman named Kerr began the construction of the Moxie taking the water out of the Yekima Mr. Kerr was an educated enr, and in building his ditch care, avoided the errors of amateurs, one of the greatest being to give a ditch too och fall. The average fall in the ditch bes. With this six miles of ditch, out 5200 acres were put under irriga-a, not counting the mileage of the all lateral ditches. Prior to that time people living in the town of Yakima here and there tapped the Yakima River for the purpose of irrigating little patches of garden surrounding their dwellings. Although astonishing results were achieved in the way of growth of flowers, of hops and of orchards, the people seemed self-satisfied at their small efconstruction of the Moxie ditch did not open their eyes to the full comprehension of what could be accomplished. Strangers entering the valley after passing through the dust and dunes between Sprague and Pasco, thence extending to Prosser's Falls, were surprised at the thriftiness of growth observed along the Yakima River and especially in the Yakima Valley. Commenting thereupon in the presence of Eastern visitors resulted in Gardiner Hubbard, a capitalist well known in Washington City, sending out an enginearing party to prospect for the constru tion of irrigating canals which would irri-gate the lands lying south and east of Yakima City. An effort was made to cut off a portion of the Yakima Indian Reservation, as its "lay" was such as to make it subject to water flow from the Yakima Biver but the wildershoot. River, but the philanthropists controlling the Indian Department could only see in this effort a scheme to defraud the In-dians out of their lands, the acreage of they knew not and in the full use of which they had little concern. The pro-pector being folled, cessed further effort for some four or five years, and it was not until 1887 that others took up the project and began the construction of a ditch now known as the "Sunnyside Irrigating Canal System," beginning near the old town of Yakima and extending southeasterly to Prosser's Falls, a distance of 60 The head gate is 62 feet wide at the top and 30 feet wide at the bottom, and at full capacity will carry about eight feet of water. An estimate made by the en-gineers shows that about 70,000 acres can be Irrigated. In addition to the main canal, there are branches and interal ditches of about 160 miles, the construction of these latter being made at a com-paratively small expense. The even-numbered sections covered by the ditch could at any time and a great many acres were purchased at \$50 per acre. The lands, after frigation, enhance at a tremendous percentage and are worth today all the way from \$60 to \$150.

Artesian Well Irrigation.

In the absence of flowing streams that by engineering skill may be successfully adopted and the waters of which may be distributed over large areas, it has been successfully demonstrated that irrigation can be accomplished by artesian wells. It, however, is but fair to state that the scelegical construction of Fast that the geological construction-of Eastern Oregon, for instance-does not encourage, so far as experiments have been the sinking of artesian wells, and, on the other hand, the experiments aiready made show that where the attempt to bore artesian wells has been intelli-gently followed a flow of water has been almost of volume sufficient to suggest large expenditures and promising

A most successful example of irrigation

by artesian wells is that upon the Hun-ter farm, near Mellette, S. D. This farm contains now about 1200 acres and an tesian well 1075 feet deep. The pipe is six inches in diameter and the pressure is 165 pounds to the square inch, discharging 1200 gallons a minute. A reservoir covering about six acres and about the feet deep has been constructed at a cost of less than \$1000. The boring of the well cost in the neighborhood of \$1000. The water flow is sufficient to irrigate about three sections of land during the first year. By seepage on the one hand and retention in the earth on the other, it is found that as the seasons follow each other the necessity for an overflow of wa-ter is lessened so that an amount of water sufficient to irrigate 1000 acres one year may be used sutisfactorily upon 1500 the second year; 2000 the third year and so on. second year; now the third year and so on.
At Melette the surplus water has formed
eweral small lakes on the farm, greatly
beautifying the place and affording an
abundant supply of water for stock. For domestic use the water is forced through pipes leading from the well, the pressure ng so great as to admit of its being | farming

gated, the yield has been very small in the way of wheat, oats, corn or vegetables, and in fact, some seasons there has been a total failure. The yield on the Hunter farm averages 33 bushels of wheat, to bushels of oats, 42 bushels of corn, and from 200 to 250 bushels of potatoes and other crops in proportion. South Dakota is frequently visited by very hot winds in July, and as well known, by blizzards in Winter. The Summer winds seem to have no appreciable damaging effect upon the crops on the Hunter farm, while upor others not irrigated, the effect has been most disastrous, and as a result irriga-tion has received great attention and many artesian wells have been sunk. Not-withstanding the depression in the prices received for farm products, the Hunter farm has paid in the neighborhood of 25 per cent on the capital employed.

Effect on Forest Growth.

One of the most serious menaces now surrounding the arid farming regions is the increase in dryness over arid regions not under cultivation, and this has had a very serious effect upon the growth of trees and shrubs. It has been found that many of the soils of Eastern Oregon are of such a character that along irrigating ditches there is a spontaneous growth of various kinds of trees, some of them being of considerable value and the roots of which in a few years give a permanency to the embankments that could no be otherwise obtained. In addition to this, by the use of irrigation, groves and hedges can be, I might say, easily produced. These, although hardly necessary in Eastern Oregon, in other windy countries form a break against the force of the hot winds in Summer and the bliz-zards of Winter and when the country is once supplied with the protection afforded by an ample forest growth, it has a very desirable effect upon the climate, in making it more equable and in attracting and giving off more moisture

Enhancement in Value. The enhancement in value of lands by

irrigation is far above what would first strike an ordinary observer. The evidence taken by the United States Senate committee on irrigation as far back as 1889 has considerable bearing upon this point, It shows that in no cases were the estinates in increase of value from adjacent lands not under irrigation or ditch less than \$2 to \$5 an acre, but the estimates generally run from \$15 to \$250 increase, and in exceptional cases, such as South. ern California, the increase was 25 per cent beyond this. In Arizona as a rule land is of no value until irrigated, "Un-der ditch" and cultivated farm areas are worth from \$15 to \$50; fruit lands from \$15 to \$125. In California, having advantage of a nearby market, irrigation increases the value of lands from \$50 to \$800 an acre. The increase in value in Colorado is from \$50 to \$400 per acre The committee give the value of nonirri-gated lands in Montana, Idaho and in Eastern Oregon at from \$1 to \$10 per acre; irrigated lands at from \$30 to \$50 per acre. This statement would not be complete unless the assertion follows which is borne out by the proofs that the value of the land as increased or enbanced is based upon 5 per cent of the value of what it will produce, including the cost of land and rate paid for water and the labor expended in raising a crop. In other words, it shows that land sus ceptible of irrigation and which cost \$1 25 an acre, may be made worth \$100 per acre, ordinarily, and in many cases \$500 per acre, not because of the expenditures made in connection with irrigation, but because of the difference be-tween its nonproducing condition at \$1 25 and its producing condition or capacity at the increased valuation. This is fair it is not speculative. There is no surer basis of the valuation to be placed upon a piece of land than the profits to be derived out of the land, and when in this connection it is considered that the better conducted irrigation enterprises cost from \$1 to \$5 an acre and the increase is in the neighborhood of 600 per cent, no further argument seems necessary

Irrigation in Mineral States. It must be admitted there are obstacles

to irrigation in the mining states. This not the fault of the people, nor a is not the fault of the people, nor a occurred at the County Club golf links in theory which is presented, it is rather a Brookline yesterday, as a result of which meery which is presented, it is rather a condition of affairs which originated in the State of California. In this, the first mining state in point of time, of the several states, the miners made local laws governing the use of water and these running parallel and having the same object in view as the local laws regulating the holding and working of mining ground, were at the time thought to be the best for the interests of the miners and for the business in which they were engaged. It may be assumed that at the time being these laws were based upon right and to a certain extent were equitable. The men making these local laws had had a better grip upon common had had a better grip upon common sense and their own interests than upon technicalities of law. The courts which were first called to pass upon these local laws respected them, not because of the votes of the miners, but because they made the conditions existing, and the Legislature, following the courts and below. islature, following the courts and being largely composed of men and lawyers. recognized the fact that these local laws applied—that they recognized property rights, lapor rights and the fruit of dis covery, and for these reasons the local laws, in their gist at least, became state laws. Fortunately or unfortunately the other states or territories in which the precious metals were found took cue from California and as a result all the states now known as "Sliver States" copied and were controlled by the enactments of the Legislatures. In the early days of California that state had incorporated into its constitution a provision declaring that the common law of Eng-land should be the rule of action in its courts and that that great unwritten law which grew by night and day in the country in which no man ever thought of irrigation, declared that every bank owner had the right to use the water flowing along his bank "undiminished in quantity," unimpaired in quality."

unimpaired in quality."

This has given rise to much litigation, and where there is litigation—an expensive luxury, and as a luxury, not enjoyed by anyone except the lawyer who works hard for what he gets out of it—the profits are curtailed and often the laborer does not get his hire, entailing more litigation in which labor is brought against control in which labor is brought against capital and mingles with litigation to its cost the second time. In no state has the clash been more direct or more severe to either side than in California, and it has suggested to her sister states an avoidance of the causes that have led to these results. Broadly, but still plainly speaking, the operations of irrigation have no rights that mining operations should respect. The precious metals have the call-how long, into how many years this call shall project as a license or right, re-mains with the majority of the people, but for us in the State of Oregon, with mines located contiguous to valleys that require irrigation, and which, when irrigated, shall blossom like the rose, the question is one of vital importance, and to this im-portance is added the ever-present necessity of settling the question. Even if from a limited supply the miner wants water, and under our present system of laws and the construction of the courts, the irri-gationist cannot have it, it is an open question as to which is the better or the valuable to a state or to a com-

Irrigation Succeeds Mining.

Irrigation succeeds mining; not once in five hundred times is this reversed, but that once means wealth to the proprietor. How is that wealth spent The miner is a spender, as a rule. Should his mine roll How is that wealth spent? The miner is a rich. The irrigationist, on the other hand, is governed by the law of thrift; by the law of working and earning, not by luck or chance. There is no use in being sentimental about this matter. We must look squarely in the face the condition of things and decide whether or not the

carried a very long distance and taken to a considerable height. On lands adjoining the Hunter farm, but which are not irri-ing the mountains and the hills to the miner where mines are most frequently found, there is no doubt that the products of successful irrigation properly projected and carried out on a common-sense basis will contribute more to the happiness and prosperity of the West than all the gold and silver yet found on this continent

Laws Affecting Irrigation.

This assertion brings us back to the gation and riparian rights. The decision of Judge Ross, of Los Angeles, if sus-tained by higher tribunals than that in which he sits, will deal irrigation a blow which he sits./will deal irrigation a blow that will require the education of the peo-ple and the scotching of speculation to overcome. Admitting that the riparian, doctrine, as announced by Judge Ross, is the law, the question naturally arises, if the taking of water for irrigation is not for public use, in what manner can any rights to water be condemned for the use of the public. A man with 10 feet front on a stream may say to the users of waters above him, "you have paid everybody gise for the water; I want my pay also." In what a deplorable condition that would leave us. No matter how worthless his land may be; no matter whether or not the use of water upon it would benefit

it. That cuts no figure. Lest complications arise and costly liti-gation follow, it would be well for some statesman who may have been accidentally elected to the Legislative Assembly soon to meet, to take up the subjects herein touched upon and frame an act which may be of benefit to the state and the people. It is fraught with importance, Existing laws are far from being clear upon riparian rights, irrigation or min-

Irrigation and Good Roads.

With salutary laws upon these matters followed by goods roads throughout the state, Oregon will add 50 per cent to her Irrigation and good roads are of vast importance to our people. I am surprised at the lack of interest taken in the value of properly constructed roads. The supervisorship of roads under the dif-ferent countles of Oregon is a farce. Not one supervisor in a hundred knows a good road when he sees it, much less a bad one. I have yet to meet five county road supervisors who have shown any ability except in the way of securing appointment by the County Courts or eleciton, under the law of the last session of the Legislature. The methods of work-ing roads are not half as good as the plans followed for working the taxpayers. For 14 years I have had charge of the details of a road 487 miles long in this state, and I am ready to place it in co parison against any county road similar ly located in Oregon. The repair and keeping of roads is no great tax upon anything above common sense and what one may learn from experience.

The next liegislature should prove for a State Engineer to take charge of the roads of the state. The state, because of its peculiar topography, should be divided into two districts, one taking in the west-ern and the other the eastern part of

Engineer Should Be Provided.

the state. The roads west of the Cas cades require a totally different method of treatment from those of Eastern Oregon. The matter of bridge construction and repair receive but scant attention but it is of great importance. The shedding of water off the roads, the preven-tion of washouts is but little understood Practical methods should be put in vogue The existing road supervisor should be sent away back and made to sit still From long experience he can do the lat-ter well. R. W. MITCHELL

THREE TRAINMEN KILLED

Patal Boiler Explosion on the Baltimore & Ohio.

BALTIMORE, Nov. 2.-Three training were almost instantly killed today by the explosion of the boller of a Baltimore & Ohio locomotive at Hale Top. Traffic was delayed about three hours. The dead are Engineer E. W. Biggs, Fireman O. W. Hunt and Brakeman C. O. Stalling

Golfer Lost an Eye.

BOSION, Nov. 2-A distressing accident Mr. Herbert Jacques, well known in so-ciety, an enthusiastic golfer, and a prominent architect, has lost his left eye. A member of the Royal Montreal Club of Golfers was responsible for the accident, which occurred at the first tee Mr. Jacques was preparing to drive off, when he was struck in the eye by a ball from a distance of 40 yards. The Canadian player was trying to play out from a clump of bushes, and did not see Mr. Jacques ahead. The optic nerve was paralyzed and it became necessary to remove the eye.

Four Killed by Train.

ELGIN, Ill., Nov. 2.-Frank and Louis Schutte and Charles and James Woodrich were killed early today at Algonouin, Ill. when the milk express on the Chicago & Northwestern Railroad struck their carriage on the crossing of the main street of the village. All lived at Algonquin, and did not see the train on account of the carkness and the cover of the buggy.

AFRAID OF DOUKHBORS.

Manitoba Doesn't Want Them-Sifton Says They're Harmless.

OTTAWA, Ont., Nov. 2.-Premier Roblin of Manitoba, has telegraphed Clifford Sif-ton, Minister of the Interior, to prevent the Doukhbors entering Manitoba, belunatics and criminals, and the province had no means of doing this. He wanted a guarantee against financial loss. Mr. Sifton replied that the Dominion officials were looking after the Doukhbors, and there was no reason to believe that they would do harm to any one but themselves. He did not, therefore, see any need of guarantee against loss, and stated if Pre-mier Roblin interfered with the Dominion officers, he would do so on his own re

Went Back for Clothing.

YORKTOWN, N. W. T., Nov. 2-Several of the men who composed the Doukbbors pilgrimage have returned here. One of them came to Agent Crearer and asked for the clothing and blankets which he had discarded on the march. When asked if he intended to return to his village, he replied that that was his intention. Word was brought in this morning that several of the men were in an exhausted condition on the line of march between here and

THEY'LL HAVE AN ORGAN First Pastor Objects and Will Quit the Church.

LEXINGTON, Ky., Nov. 2-As the result of the Broadway Disciples' Church here to submit to a vote of the congregation the question of installing an organ Rev. J. W. McGarvey, president of the College of the Bible, founder of the church in 1870, and its first pastor, today asked for letters for himself and wife, that they might transfer their membership. His attitude has prevented the introduction of an organ for many years, but sentiment in its favor became so great that the vote The congregation was overwhelming. numbers over 1200, and its action is regard-ed as a victory for the progressive ele-

Rock Island Gets to St. Paul. DENVER, Nov. 2.-Another important step in the extension of the Rock Island system has just been completed. Several months ago the Burlington, Cedar Rapids

& Northern Rallway was made a part of this system, and immediate steps were taken to extend the line to Minneapolis and St. Paul. The work has been com munity have a right to speak i pleted, and today trains of the Rock with and sunk the Spanish steamer Enero, Captain Delgado, from Huelva, Spain October 22. With the exception of three

that when his vessel struck the Enero he gave the order for full speed ahead, with the idea of keeping the two vessels locked together, and thus enabling the crew of the Spanish ship to board the St.

The Enero sank in a few minutes. The explosion of her bollers probably killed many of her crew.

The St. Regulus was badly damaged, a

(The Enero was an iron steamer of 1322 tons net register. She was 232 feet long and was built in 1898 at Newcastle-on-Type. The Enero was owned by the Compagnia Bilbania de Navigacion, of

St. Regulus, Captain McMullen, from to lower a boat, with the result that a stroyed a section of the business district. Shields for Alexandria, has put in at number were thrown into the sea and and wiped out houses in which a dozen drowned. The Enero sank in a few minfamilies lived. Loss, \$75,000.

Count Tolstoi Ill.

ST. PETERSBURG, Nov. 2.- The Novosti says that Count Tolstoi is suffering from an attack of inflammation of the

lungs.

RECREATION.

42,500.00 WILL BE GIVEN AWAY IN JAN. 1903 TO SMOKERS OF THE BEST AND LARGEST SELLING BRANDS OF CIGARS CUBANOLA54 GREMO54 GEO. W. CHILDS JACKSONSQUARE

HOW MANY CIGARS will the United States collect Taxes on during the Month of December, 1992?

\$142,500.00 will be given in January, 1903, to the persons whose estimates are nearest to the number of cigars on which \$3.00 tax per thousand is paid during the month of December, 1902, as shown by the total sales of stamps made by the United States Internal Revenue Department during December, 1902.

Distribution will be made as followed

Distribution, will be made as ionows;		
To the(1) person estimating the closest	\$5.000.00 in c	ash
To the2 persons whose estimates are next closest(\$2,500.00 each)	5:000.00	
To the 5 persons whose estimates are next closest (\$1,000.00 each)	5.000.00	
To the10 persons whose estimates are next closest(\$500.00 each)	5.000.00	
To the 20 persons whose esitmates are next closest	5.000.00	
To the25 persons whose estimates are next closest(\$100.00 each)	2.500.00	
To the 50 persons whose estimates are next closest(\$50.00 each)	2.500.00 "	
To the100 persons whose estimates are next closest(\$25,00 each)	2,500.00 4	- 61
To the, 2,000 persons whose estimates are next closest	20.000.00 "	
To the .8.000 persons whose estimates are next closest(\$5.00 each)	15,000.00	
To the 90,000 persons whose estimates are next closest we will send		
to each one box of 50 "Cremo" Cigars (value \$2.50 per box)	75,000.00	
35.913	1. 0,000	

Every 100 bands from above named cigars will entitle you to four estimates.

(One "Florodora" band counting as two bands from the 5 cent eigers mentioned; and no less) than 100 bands will be received at any one time for estimates.)

35.213 persons......\$142,500.00

Information which may be of value in making estimates:-the number of Cigars now bearing \$3.00 Tax per thousand, for which Stamps were purchased, appears below:

In December, 1900, 407,092,208 Cigars. " December, 1901, 479,312,170 " "January, 1902, 496,983,717 " " February, 1902, 445,495,488 "

an March, 1902, 516,599,027 Cigara April, 1903, 516,835,163 1-7 May, 1902. 523,035,907

In case of a tie in estimates, the amount offered will be divided equally among those entitled to it. Distribution of the awards will be made as soon after January 1st, 1903 as the figures are obtainable from the Internal Revenue Department of the United States for December.

Write your full name and Post Office Address plainly on packages containing bands. The Postage, or Express charges on your package must be fully prepaid, in order for your estimate to participate. All estimates under this offer must be forwarded before December 1st, 1902, to the . . FLORODORA TAG COMPANY, Jersey City, N. J.

You do not lose the value of your bands. Receipts will be sent you for your bands, and these receipts will be just as good as the bands themselves in securing Presents. One band from "Florodora," or two bands from any of the other Cigars mentioned above, will count in securing Presents the same as one tag from "Star," "Horse Shoe," "Spear Head," "Standard Navy," "Old Peach and Honey," "J. T." "Master Workman," "Piper Heidsleck," "Jolly Tar," "Boot Jack," "Old Honesty," "Razor," or "Planet" Tobecco; or one "Sweet Caporal" Cigarette Box Front.

Send each estimate on a separate place of paper, with your name and address plainly written on each. Blank forms for estimates will be mailed upon application. Illustrated Catalogue of Presents for 1908 and 1904 will be ready for distribution about December 1st, 1902, and will be mailed on eceipt of ten cents, or ten tobacco tags, or twenty cigar bands.

Island system commenced to run over its own rails into Minneapolis and St. Paul. Trains were formerly operated as far as Faribault, and it was from that point the line was extended. The Union Station in St. Paul will be used by the new line, and in Minneapolis the station now occupied by the Chicago, Milwaukee & St. Paul Raliroad will give excellent terminal facilities. This new step gives the Rock Island system its own line direct from Chicago to Minnespolis, St. Paul

She reports having collided october 22 with the exception of three members, the crew of the Enero was drowned. The accident occurred Friday night off Dungeness.

The captain of the St. Regulus says

large hole being stove in her stem,

and the Northwest, and places it in direct connection with the East and the South.

Spanish Steamer Sinks in Collision.

LONDON, Nov. 2.—The British steamer ing on board the British ship, they tried in mont, Westchester County, today de
The Worthwest, and places it in direct connection with the East and the South.

Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and, instead of climbing the connection with the East and the Spanish ship to board the St. Regulus, but either they were too greatly alarmed to do so or they failed to understand his purpose, and instead of climbing the connection with the East and the Spanish ship to board