

Resources of Yuma County.

YUMA COUNTY.

A white man first set foot on what is now Yuma County in 1771. It is the southwest division of the Territory, and one of the four original counties of the Territory. Many great reclamation projects are however on foot, and in a few years expect to see Yuma County rated as the richest in the Territory.

The first glimpse the traveler from California catches of Arizona is that of the picturesque town of Yuma, which is snugly situated in the embrace of gentle rolling hills, upon whose crests and sides the modern homes of our superior civilization are crowding the adobe dwellings into eternal oblivion. Yuma is the gateway to Arizona, the new empire of the West, upon whose undeveloped riches the eyes of the country are at present turned, and as such, she is bound to grow and prosper with a rapidity that at present can hardly be realized. But coupled with her geographical position we find that she is the center of a country whose agricultural possibilities are practically unlimited, being surrounded by a soil the fertility of which exceeds that of the delta of the Nile, and wanting only water to become a paradise of bloom. Billions of gallons of that precious fluid have annually gone to waste at Yuma's very doors, but already a reaction is taking place and many enterprises are on foot to supply the life-giving waters of the yellow Colorado to the thirsty earth.

RIVERS OF YUMA COUNTY.

In regard to climate, healthfulness, fertility and productiveness of soil, facilities for cultivation, irrigation and abundance of water supply, variety of resources and cheap transportation by rail and by water, no part of Arizona can surpass Yuma county, which is destined to become one of the most and most prosperous counties in Arizona.

It lies between 32° 00' and 34° 30' north latitude and 113° 30' and 114° 40' west longitude. It contains 6,488,320 acres. It is about as large as the States of Rhode Island, Connecticut and Delaware combined, or as large as either New Hampshire, Vermont or Massachusetts.

The western boundary of Yuma County is formed by the Colorado river, which separates Arizona from California. The county is bounded on the north by Williams Fork and the Santa Maria river, whose waters flow into the Colorado; on the east by the counties of Pima, Maricopa and Yavapai, and on the south by Sonora, Mexico. Its county seat is the town of Yuma.

The Colorado river drains the entire territory of Arizona, and every drop of water which falls on its mountains and plains finds its way to this mighty river. It is formed by the union of the Green and Grand rivers, fed by the streams which rise in the Rocky Mountains, and the melting snows cause a greater depth of water in this river in summer than in winter, thus furnishing the most water at the season when it is most required for the purposes of irrigation and agriculture.

It will be seen that for the entire distance along its western boundary, Yuma County possesses the great advantage of cheap water transportation.

The Gila river rises in the western part of New Mexico and is fed by numerous streams, among the most prominent of which are the San Pedro, Agua Fria, Hualayampa and Salt rivers. It flows west through Yuma County and empties into the Colorado at the town of Yuma.

Yuma county, traversed by these great rivers from its northern to its southern, and from its eastern to its western boundaries, possesses a far greater water supply than any other county in the Territory, and far more than can be found in all California.

This water is now being diverted from its natural channels by means of numerous large irrigating canals, and utilized for the purpose of reclaiming and irrigating the immense tracts of lands which lie in this favored country, and which are as fertile as any in the world.

The Southern Pacific Railroad crosses the Colorado river at the town of Yuma and runs through the county, following the general course, and at an average distance of about four miles south of the Gila river, rendering all the lands susceptible of irrigation and cultivation, can find an easy outlet in this way and can be transported to all the markets and centers of population in the East or West.

THE CLIMATE OF YUMA.

The climate of Yuma for nine months of the year has no equal, as we believe, in the world, and during the remaining three months of the year, comprising June, July and August, the heat is not oppressive. Even though the thermometer in mid-summer may at times rise above 100°, yet, owing to the absence of moisture in the air, it is not oppressive. The atmosphere is pure, light and balmy. When the mercury marks the highest extreme of heat, a person does not feel that oppression or debility which is felt in the Eastern States when the air is ranging from 90° to 95°. The air is so dry that perspiration is absorbed as soon as it reaches the surface of the body, and at no time in the summer does the heat produce any discomfort.

LANDS AND SOILS.

The lands of Yuma County comprise the river bottoms and valleys and the uplands or mesas. The bottom lands are fertile and highly productive, indeed, it is possible to make comparisons with the most fertile lands of the East. The uplands or mesas are warmer and, perhaps, slightly better for the cultivation of the citrus fruits.

On the Gila and Colorado rivers have for the most part a deep sedimentary soil of brownish, gray sandy loam, resting, in most places, upon a gray clay subsoil at a depth of from ten to twenty feet below the surface. The clay subsoil forms a hard pan which is impervious to water. These soils have been slowly formed by the decomposition of shales, sandstones, marls, limestones, etc., mixed with organic and vegetable matter, washed down by the mighty rivers and have been gradually deposited during the course of centuries. The fertilizing brownish mud held in the water of the Colorado and Gila rivers resembles that from the Nile, and its quantity varies from 0.1 to 0.5 per cent., though the water when even considerably discolored by mud is good to drink, resembling in this respect the Missouri river water. A chemical analysis of the sediments of the Colorado and of the Nile exhibits a wonderful similarity in the constituent parts of each. That of the Colorado exhibiting a trifling excess of potash, phosphoric acid and carbonate of lime, and a deficiency of silica. The Colorado is almost identical with that of the Nile. It will be noticed, therefore, that when this water is used for irrigation it is superior to any other water since it is constantly supplying the land with the richest fertilizing elements. The soil of the valleys is extremely rich in decomposed vegetable matter and uncombined carbon, readily absorbing the aerial gases, such especially as oxygen, which entering the soil, decomposes the organic matters so that they can be taken up by the plants. It is for this reason that the soil is considered a leading feature in its fertility. It also readily takes up and retains moisture, while the firmness of its particles affords every facility for penetration and the activity of capillary action. In its mechanical composition its particles are in a state of very fine division, which renders it very productive, and the coarse soils of the country heat readily in the daytime, and the loss of the heat at night is very gradual, so that it remains always warm and is not subject to sudden changes of heat and cold. Besides its essential constituents of water, organic or vegetable matter, sand and clay, a chemical analysis shows that lime, soda, magnesia, iron, ammonia, available phosphorus, silicon, phosphoric acid and potash enter into composition in the proportions best adapted to aid its fertility, though, of course, as is always the case in soil analysis, its composition varies in different localities and is not always constant.

The soil of the uplands, or mesas, is lighter and more gravelly and in some places of a free, loamy, calcareous character. The mesa lands are not so generous. They seem especially adapted for the grape, olive and citrus fruits generally. Their soil contains more magnesia, lime or chalk than the bottom lands. It never cracks and retains moisture admirably in summer. It is of that character which will produce a yield which will keep good for fifty or a hundred years, and improve annually, and is liable to soil, or on exposure to the air, after one year old, to become trampled and change color in the bottle or glass.

We can safely say that the soil of Yuma County can nowhere be surpassed, containing as it does all the essential elements of richness and fertility.

FRUIT CULTURE.

Fruit production throughout Arizona is a subject of great interest at present, and will no doubt, be the principal industry in Yuma County. The remarkable results that have sprung from very superficial and imperfect culture has demonstrated that the soil and climate of Yuma County are peculiarly adapted for this branch of agricultural enterprise. The development of these resources is of the utmost importance and is attracting careful attention. Experiments have been made, with care, and facts in regard to the culture of different kinds of fruits have been collected which cannot fail to convince, even the most skeptical, of the wonderful superiority of Yuma County over Southern California in fruit growing, and which must lead to a large and varied production, of the most remunerative character.

The Commissioner of Immigration in his report, published in 1888, writes as follows of the rich valleys of the Gila, Colorado and Salt rivers.

"The soil of these valleys is among the richest on the continent. It is formed of the detritus which the streams for ages have brought down from their mountain homes in their journey to the sea. By constant overflows and change of channel, the deposits of this rich vegetable matter has formed a soil of extreme fertility. Near the streams is a dark alluvial mold, well adapted to small grains and grasses. Farther back there is a rich sandy loam, mellow and porous, and especially favorable for fruit culture. It has been already demonstrated that the productive capacity of these valleys is not surpassed by lands of equal area in any part of the United States. So rapid and prolific is the growth of the fruits, cereals and vegetables that the labor of the cultivator is reduced to the minimum. In nearly all of them two crops a year can be grown, and vegetation is one month ahead of California. The farmer plants a cottonwood sapling before his door, and within the year he has a shade tree twenty-five feet high! Alfalfa can be cut six times during the season, and it is an actual fact that the grape-vine has produced within eighteen months! What State or Territory can make such a showing! The climate, it must be remembered, is nearly perpetual summer. Snow never falls in these southern valleys. The farmer begins to plant in November, and by the middle of May his harvest is ready. Bunches of grapes, fruit trees are blossoming, and the grain fields are a sea of green, when the fields of the Eastern farmers are covered with snow and ice."

Every variety of grains, grasses, fruits and vegetables grown in the temperate and semi-tropical zones can be produced in the valleys of Arizona. Wheat, corn, barley, oats and all the small grains give a yield of from twenty-five to fifty bushels to the acre. Alfalfa, clover, timothy, Bermuda and all the cultivated grasses grow luxuriantly, the former giving from eight to ten tons to the acre each year. Every variety of vegetable raised in the United States can be grown in Arizona, and nowhere are they found of better quality.

"Besides the products mentioned, these semi-tropical valleys produce cotton, sugar-cane, sugarcane, hemp and rice. With the exception of the sugarcane, but little attention is paid to the cultivation of other staples; but it has been demonstrated that the soil and climate are specially adapted to their successful growth. Cotton-growing is no experiment in Arizona, for it is on record that when the Europeans first penetrated this region they found the Pima Indians weaving fabrics made of cotton grown in the Gila valley."

"But it is their adaptability for fruit culture that assures to these valleys a dense population and a prosperous future. Almost every variety known can be raised in their fruitful soils. The apple, pear, plum, peach, apricot, quince and nut are of delicious flavor, and give a generous yield. The grape of all varieties is at home in these sunny vales. No place in the grape-growing belt of the Pacific Coast can show so prolific a yield. The quality is all that can be desired, and the wine, although its manufacture is not yet perfected, is of a fine flavor, delicious bouquet and unimpaired by any native product as a table beverage. Experiments with the raisin-grape have shown that this climate and soil possess every advantage for the production and curing of this staple article of commerce."

"Besides the fruit already mentioned, the orange, lemon, lime, olive, fig, pomegranate, and others of the citrus family, can be grown successfully in the valleys of Southern Arizona. Orange trees are now in bearing in the Salt River valley and at Yuma; while the banana is also being cultivated at the latter place. The Arizona orange in quality and flavor will compare favorably with the best California."

"In the valleys of the Colorado, the Salt and the Gila rivers, there is room for thousands. It is not too much to say that nowhere within the limits of this broad Union can be found a more desirable region for the making of a home. No laborious clearing of the land is required; it lies almost ready for the plow. Trees and shrubbery have so rapid a growth that within eighteen months the immigrant can surround his abode with attractions which would require years to mature in less favored climates. Fruits ripe and are ready for market a full month before the California product. The bright sunshine makes life a luxury, and the pure, dry atmosphere brings health to all who inhale it. For the establishment of colonies, such as we have made of Southern California a vision, Arizona presents unrivaled opportunities. Thousands of

acres, now profuse, can be made productive by the construction of irrigating ditches, and there is no investment which assures larger or more permanent returns."

WHY IMMIGRANTS SHOULD COME TO YUMA COUNTY.

Because the climate is perfect.
Because the soil is fertile and prolific.
Because land is abundant and cheap.
Because a home can be made with little labor.

Because so great a variety of products can be grown.
Because the yield is large and the price always remunerative.
Because life is a luxury in a land where the sun shines every day.

Because there are chances for a poor man which he can never hope to find in older countries.

Because the country is advancing and property values are increasing.
Because, unlike Southern California it does not require a small fortune to secure a piece of land.

Because capital need not block all the avenues to wealth, nor crowd the poor man to the wall.
Because Uncle Sam has yet many farms in Yuma county waiting for occupants.

Because churches, schools, newspapers and railroads are fast developing the moral and material elements of the Territory.
Because good land is becoming scarce, and if you don't catch on now, your best chance will soon be gone.

Because the country is one of the few regions of the United States that yields the products of the temperate and semi-tropical zones.

Because the worker receives a fair compensation for his labor, and the 'trustee' has a field for the display of his energy and enterprise.

Because there are neither blizzards or tornadoes, earthquakes nor inundations, snow-storms nor cyclones.

Because the vast and varied resources of the country are yet to be developed.
Because the wealth of its mines, its farming valleys, and grazing lands, will yet build up a great and prosperous country.

Because a man can make a livelihood here, with less labor than in any other part of the United States.

Because there is health in every breeze, and strength and vigor under its cloudless skies.
Because the settler need not spend a lifetime in felling trees and grubbing out stumps.

Because vegetation is so rapid that in two years the home is surrounded by a growth of trees and shrubs which would require five years to develop in a colder climate.

Because fortunes here await the venturesome, and health welcomes the afflicted.
Because the country has a brilliant future and you want to be in the 'swim.'

Because in its pure, dry, invigorating air, epidemic diseases cannot live or germinate.
Because its people are generous, liberal, hospitable and progressive.

WHY CAPITAL SHOULD SEEK YUMA COUNTY.

Because its mines are the richest.
Because its grazing lands are the best.
Because its farming lands are valuable and productive.

Because it gives assurance of the largest returns on money invested.
Because its grand resources are yet to be developed.

Because it is a young, growing country with an assured future.
Because the opportunities for engaging in manufacturing enterprises are better than in any other region of the West.

Because good mining properties can be had at reasonable figures.
Because there is a demand for additional facilities for ore reduction.

Because there are vast stretches of rich soil to be reclaimed by the construction of irrigating canals.
Because there are large tracts of grass lands that can be utilized by the sinking of artesian wells.

Because there are many openings in a new country which cannot exist in older communities.
Because the opportunities for engaging in the successful cultivation of semi-tropical fruits are better than in any other part of the United States.

Because property values are rapidly advancing.
Because Arizona's boom is yet to come.

Because it is a virgin field, ready for the seed which will produce a golden harvest.

ARIZONA.

Arizona stands at the threshold of an era of wonderful social and industrial development. There can be no doubt about the fact. The dawn for which she has waited so long is breaking at last. There is every promise of a day of great prosperity and permanent well-being just before her. The impulse of a new and energizing hope is visible everywhere among her people, while the cumulative effect of many things, which made but small impression as they transpired singly, is now commanding for her a full share of attention and interest abroad among home-seekers and capitalists.

APPLICATION FOR A PATENT—No. 638.

U. S. LAND OFFICE,
Tucson, Ariz., December 22, 1894.
Notice is hereby given that Charles W. Prange, whose postoffice address is Harrisburg, Arizona, has filed his application for a patent for fifteen hundred linear feet of the Ophir mine or vein, bearing gold and silver, with surface ground six hundred feet in width, situated in Ellsworth Mining District, county of Maricopa, and Territory of Arizona, and designated by the field notes and official plat on file in this office, as survey No. 1142, and survey No. 1143 being described as follows, to-wit:

Beginning at Corner No. 1, I. M., identical with corner No. 1 of the location, a redwood post marked 2-1142. U. S. L. M. No. 1142 bears S. 41 deg. 20 min. E. 807.5 feet.
Thence S. 27 deg. 30 min. W. 300 feet to corner No. 2, a redwood post marked 2-1142.
Thence N. 52 deg. 30 min. W. 1500 feet to corner No. 3, a redwood post marked 2-1142.
Thence N. 37 deg. 30 min. E. 300 feet to corner No. 4, a redwood post marked 2-1142.
Thence N. 37 deg. 30 min. E. 273.5 feet to corner No. 5, a redwood post marked 2-1142.
Thence S. 53 deg. 30 min. E. 1500.56 feet to corner No. 6, a redwood post marked 2-1142.
Thence S. 37 deg. 30 min. W. 300 feet to corner No. 1, I. M., the place of beginning.
Magnetic variation 15 deg. 30 min. E., containing 20.31 acres.

The location of this mine is recorded in the Recorder's office of Maricopa county, in Book No. 5, page 436 of mining claims.

There are no adjoining claimants excepting owner of Sunrise mining claim on the Northeast.
Any and all persons claiming adversely any portion of said Ophir mine or surface ground, are required to file their adverse claims with the Register of the United States Land Office at Tucson, Pima county, Arizona, during the sixty days period of publication hereof, or they will be barred by virtue of the provisions of the statute.

EUGENE J. TRIPPEL, Register.
DAMRON & CRENSHAW, Attorneys for Claimant.

MINING APPLICATION NO. 633.

U. S. LAND OFFICE, TUCSON, ARIZ.,
November 27, 1894.
Notice is hereby given that Charles W. Prange, whose postoffice address is Harrisburg, Arizona, has made application for a patent for fifteen hundred linear feet of the U. S. Grant mine or vein bearing gold and silver, situated in Ellsworth Mining District, Maricopa County, Arizona, and described in the official plat and field notes on file in this office, as follows, to-wit:

Beginning at cor. No. 1, I. M., identical with corner No. 1 of the location, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone, and marked 2-1144. U. S. L. M. No. 1144 bears S. 8 deg. 30 min. E. 1095.5 ft. Thence N. 37 deg. 30 min. E. 300 ft. to corner No. 2, identical with cor. No. 2 of the location, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone and marked 2-1144. Thence N. 52 deg. 30 min. W. 1500 ft. to cor. No. 3, identical with cor. No. 3 of the location, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone and marked 2-1144. Thence S. 27 deg. 30 min. W. 300 ft. to cor. No. 4, identical with cor. No. 4 of the location, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone and marked 2-1144. Thence S. 37 deg. 30 min. W. 300 ft. to cor. No. 5, identical with cor. No. 5 of the location, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone and marked 2-1144. Thence S. 53 deg. 30 min. E. 1500.56 ft. to cor. No. 6, identical with cor. No. 6 of the location, and also identical with cor. No. 6 of survey No. 1142, a redwood post 4 in. square, 4 ft. long, set 1 ft. in the ground, surrounded with a mound of stone, and marked 2-1144. This point is also marked 6-1142. Thence N. 37 deg. 30 min. E. 300 ft. to cor. No. 1, I. M., the place of beginning.
Containing 20.46 acres. Magnetic variation 15 deg. 30 min. E.

The location of this mine is recorded in the Recorder's office of Maricopa county, Arizona, on page 40 and amended location on page 111 of Book No. 6 of Mining Claims. Adjoining claimants are the Ophir mine, survey No. 1142, on the south and the Sunrise mine, survey No. 1143, on the southeast.
All persons holding adverse claims thereto are required to present the same before this office within sixty days from the first day of publication hereof, or they will be barred by virtue of the provisions of the statute.

EUGENE J. TRIPPEL, Register.
DAMRON & CRENSHAW, Attorneys for Claimant.

APPLICATION FOR A PATENT—No. 637.

U. S. LAND OFFICE,
Tucson, Ariz., December 22, 1894.
Notice is hereby given that Charles W. Prange, whose postoffice address is Harrisburg, Ariz., has filed his application for a patent for fifteen hundred linear feet of the Sunrise mine or vein, bearing gold and silver, with surface ground six hundred feet in width, situated in Ellsworth Mining District, Maricopa County, Arizona, and designated by the field notes and official plat on file in this office as survey No. 1143, said survey No. 1143 being described as follows, to-wit:

Beginning at corner No. 1, I. M., identical with corner No. 1 of the location, and also identical with corner No. 1, I. M., of survey No. 1142, a redwood post marked 2-1143, and marked on opposite side 1-1142. U. S. F. M. No. 1142 bears S. 41 deg. 20 min. E. 807.5 feet.
Thence S. 27 deg. 30 min. E. 300 feet to corner No. 2, a redwood post marked 2-1143.
Thence N. 52 deg. 30 min. W. 1500 feet to corner No. 3, a redwood post marked 2-1143.
Thence N. 37 deg. 30 min. E. 300 feet to corner No. 4, a redwood post marked 2-1143.
Thence N. 37 deg. 30 min. E. 273.5 feet to corner No. 5, a redwood post marked 2-1143.
Thence S. 53 deg. 30 min. E. 1500.56 feet to corner No. 6, a redwood post marked 2-1143.
Thence S. 37 deg. 30 min. W. 300 feet to corner No. 1, I. M., the place of beginning.
Magnetic variation 15 deg. 30 min. E., containing 20.31 acres, exclusive of Survey No. 1142.

The location of this mine is recorded in the Recorder's office of Maricopa County, Arizona, in Book No. 5, page 435 of Mining Claims.

There are no adjoining claimants excepting the owner of Ophir mining claim on the northwest and any and all persons claiming adversely any portion of said Sunrise mine or surface ground, are required to file their adverse claims with the Register of the United States Land Office at Tucson, Pima County, Arizona, during the sixty days period of publication hereof, or they will be barred by virtue of the provisions of the statute.

EUGENE J. TRIPPEL, Register.
DAMRON & CRENSHAW, Attorneys for Claimant.

NOTICE.

1st Insertion Feb. 9th, 1895.
TERRITORY OF ARIZONA,
County of Yuma.

To W. J. OSWALD:—
You are hereby notified that I have expended Nine Hundred (\$900.00) Dollars in labor and improvements upon the North Bell Mining Claim, in Knoxville Mining District Yuma County, Arizona Territory, being the amount required to hold said premises for the years ending respectively, January 1st, 1897; January 1st, 1898; January 1st, 1899; January 1st, 1900; January 1st, 1901; January 1st, 1902; January 1st, 1903; January 1st, 1904 and January 1st, 1895 under the provisions of Section 2324, Revised Statute of the United States. And if within ninety (90) days from publication hereof, you fail or refuse to contribute your proportion of such expenditure as co-owner, your interest in said claim will become the property of the subscriber under the provisions of said Section 2324.

MAX ENGASSER,
Owner of said Mining Claim.



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THE ARIZONA SENTINEL

Published Weekly in Yuma, is one of oldest and most reliable newspapers of Arizona, devoted to the progress of the Territory in general and Yuma County in particular.

Loyal!
Active!
Liberal!
Courteous!

Its columns will be devoted to fruit growing, farming, mining, stock raising, irrigation and the opening up, settlement and development of the vast region of grand country that lies in Southern Arizona and its surrounding country.

IT IS ONE OF THE OLDEST PAPERS IN THE Territory.

It is the OLDEST and has the LARGEST CIRCULATION in the County.

The Latest and Most Reliable News Always Given.
INDEPENDENT IN ALL THINGS.
NEUTRAL IN NOTHING.
ITS POLICY IS SURE TO PLEASE ALL FAIR MINDED READERS

The oldest and most influential; the largest and best weekly paper in Western Arizona, especially adapted to the needs of those who wish any information in regard to the valley of the Colorado, the Nile of the West. It presents both sides of all matters pertaining to the public interest. It has no enemies to punish, no friends to pet, but treats all alike fair and truthful.

"With Charity for all and Malice toward None."

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—OF—
Every Description,

Yuma's Climate.

Weather Observer A. Ashenberger furnishes us with the following important facts relative to the climate, rainfall and weather at Yuma.

The following data from the records of the U. S. Weather Bureau are from observations taken for periods ranging from five to twenty years and are published by request of the Hon. Mayor of Yuma:

Mean actual barometer.—Yuma, 29.76 inches; Denver, Col., 24.73 inches.
Mean annual temperature.—Yuma, 78°; Jasper, Fla., 73°.
Mean maximum temperature during month of July.—Yuma, 106.6°; Phoenix, 107.3°.

Mean minimum temperature during month of July.—Yuma, 77°; Galveston, Tex., 79°.
Mean minimum temperature during month of January.—Yuma, 42°; Tucson, 35°; Phoenix, 32°.

Highest temperature recorded.—Yuma, 118°; Phoenix, 119°; Fort Lapwai, Idaho, 118°.
Lowest temperature recorded.—Yuma, 22°; Riverside, Cal. (Voluntary observer's record), 21°; Jacksonville, Fla., 15°; Galveston, Tex., 11°.

Mean relative humidity.—Yuma, 44%; San Diego, Cal., 75%; Chicago, 74%; Pascagoula, La., 76%; Port Angeles, Wash., 88%.

Mean annual rainfall.—Yuma, 3 inches; Tucson, 13 inches; Jacksonville, Fla., 55 inches; New Orleans, La., 62 inches; Nash Bay, Wash., 162 inches.

Average annual number of rainy days.—Yuma, 14; Tucson 49; St. Louis, 115; Washington, D. C., 126; New York, 126; Baltimore, 133; Chicago, 136; Cincinnati, 141; Atlanta, Ga., 141; Rochester, N. Y., 171; Tacoma Island, Wash., 186.

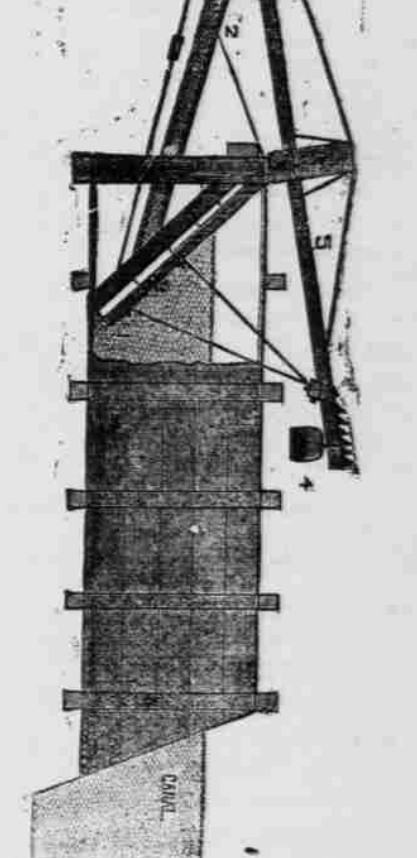
Average annual number of cloudy days.—Yuma, 17; Sacramento, Cal., 45; Oswego, N. Y., 173.
Average annual number of partly cloudy days.—Yuma, 69; Sacramento, Cal., 76; Oswego, N. Y., 124.

Average annual number of clear days.—Yuma, 279; Portland, Ore., 92; Oswego, N. Y., 68.
Average hourly wind velocity.—Yuma, 6 miles; Dodge City, Kan., 12 miles; Sandusky, O., 13 miles.

Highest wind velocity recorded.—Yuma, 54 miles; San Francisco, Cal., 60 miles.

NORTON'S Automatic Water Gate

TO PREVENT OVERFLOW IN



Irrigating canals, Ditches and Reservoirs.

The above cut illustrates an AUTOMATIC WATER GATE, to regulate and keep in subjection the rise of water in canal, due to an over-abundant flow, or to sudden rises in the canal owing to severe rains or storms.

It is particularly valuable to have such a Water Gate placed in lower bank of canal, at such points along its line where there are bays, gulches, Arroyos, Foot Hills, Buttes, or Tableland, as any rains or storms bring down at such points a surplus of water that is very dangerous to the banks of canal. The Water Gate, however, will prevent such damage, as it is

SELF-ACTING AND A PERFECT SAFETY VALVE. Raising the canal, at short intervals, of its surplus water, thus preventing the washing away of banks, and causing great damage generally, as along its line. Where there are bays, gulches, Arroyos, Foot Hills, Buttes, or Tableland, as any rains or storms bring down at such points a surplus of water that is very dangerous to the banks of canal. The Water Gate, however, will prevent such damage, as it is

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