

UTAH



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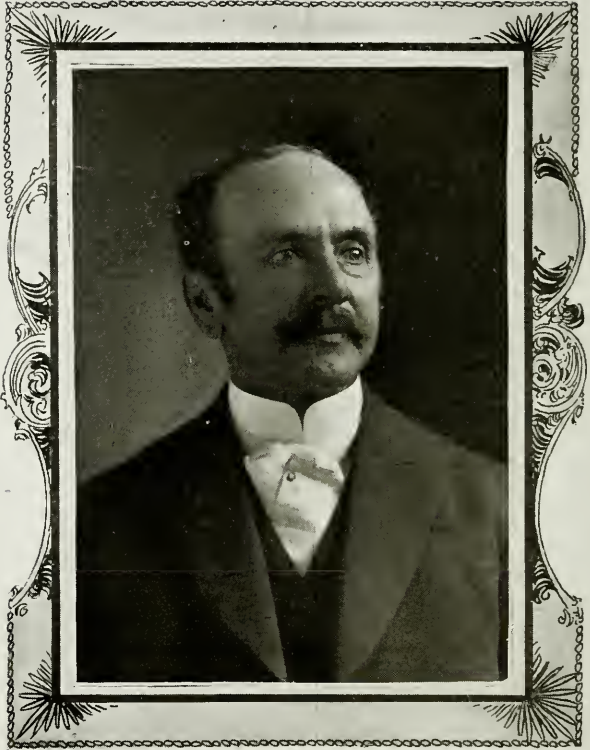
The Church of Jesus Christ
of Latter-day Saints

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GOVERNOR JOHN C. CUTLER.


UTAH

Facts to Prove that the Youngest of
the States is Progressive
and Prosperous



Issued by
THE UTAH COMMISSION
for the Lewis and Clark Centennial Exposition
Held in Portland June 1st
to October 15th

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A Word About Utah.

AND THE MANY FACTORS AT WORK FOR
ITS GREATNESS.



THIS handbook is compiled not to draw an idealized picture of the State of Utah, but to present in condensed form facts that will be of interest to homeseekers, investors and tourists. The data is given in such a way as to answer the questions which are heard from day to day on the streets and in the hotels of Salt Lake City. It has been gathered, often with considerable diffi-

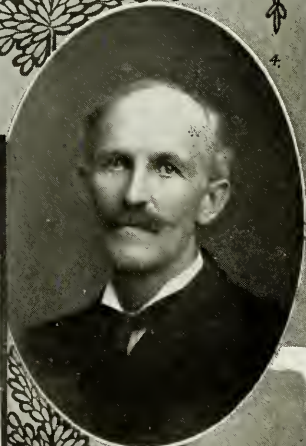
culty, from the most authoritative sources and is as accurate as research can make it.

History.—July 24, 1847, a band of 147 persons, led by Brigham Young, camped on a mountain overlooking Salt Lake valley. This was two years prior to the rush of argonauts to California. Jim Bridger and one or two trappers had visited the valley as early as 1824, but Utah's history actually began with the advent of Brigham Young and his pioneers. They were followed by train after train of immigrants. In 1850 the population was 11,380; in 1860 it

was 40,273; in 1870, 86,786; in 1880, 143,963; in 1890, 207,905; in 1900, 276,749. Brigham Young was the first governor of the Territory and remained such until 1858. The Union Pacific railway was completed to Ogden in 1869. This was the most important event in the history of Utah until January 3, 1896, when the Territory was admitted as the forty-fifth State in the Union. Since that time the history of the United States has been the history of Utah.

Geography.—Utah originally comprised what is now Western Colorado, Southern Idaho, Southwestern Wyoming and Nevada. There were no distinct boundaries until these territories were established. At present the State is 345 miles long and 285 miles wide, giving an area of 84,790 square miles. It is mountainous throughout, but is traversed from north to south by a chain of valleys of marvelous fertility. The altitude varies from 4,200 feet above sea level at the surface of Salt Lake to 12,000 feet at the summits of the Wasatch range. The average elevation of Salt Lake City is 4,300 feet, a little lower than Denver. The great variation in altitude accounts for the diversified crops that can be produced in different sections.

Climate.—Spring in Utah begins in March, summer in June and autumn weather frequently lingers until January. In 1903, a typical year, there were, according to the United States Weather Bureau, 201 cloudless days, 92 days partly cloudy and 72 cloudy. Observations taken at Salt Lake City for a period of five years from 1891 to 1895 show an average maximum temperature of 98 and an average minimum temperature of .4 of a degree above zero. The highest temperature was 100 degrees above, the lowest 1 degree below. In Salt Lake the average sum-



F. W. Fishburn
Webster Greene

Rudolph Kuchler
Wesley K. Walton

UTAH COMMISSIONERS FOR THE LEWIS & CLARK CENTENNIAL EXPOSITION

mer temperature is 72 degrees, the average winter temperature 32 degrees.

The average precipitation of moisture, according to records kept at 12 stations in all parts of Utah during periods varying from 4 to 30 years, is 11.96 inches. These stations, however, are all in the valleys where the precipitation is less than half the precipitation on the mountains where sufficient moisture falls to support a good growth of timber and grass.

Health and Disease.—Utah's climate is a foe to bacteria and disease. Many resident physicians doubt if there has ever been developed here a primary case of tuberculosis. The bulletin of the Department of Health gives the death rate of Salt Lake City at 12.17 per 1,000 per year. Of 137 cities of the United States but 20 have a death rate as low, or lower. The rate holds good throughout the State. The health records for the year 1904 show 3,319 deaths from all causes out of a population approximating one-third of a million. Of these 24 were from scarlet fever out of 538 cases; eight of smallpox out of 924 cases; 104 from diphtheria out of 667 cases; 138 from typhoid fever out of 1328 cases. The same low percentage is maintained throughout the list of ills that flesh is heir to.

Sights for the Tourist.



GREAT SALT LAKE—Seventy miles long, 30 miles wide, average depth 10 feet, area 1600 square miles. The nearest lake resort is Saltair pavilion, 16 miles. The water is 26 per cent. salt and the specific gravity is so great that it sustains the human body in any position.

Mormon Temple.—Is 210 feet high and covers 18563 square feet. Is built of native granite and cost \$3,469,118.

Tabernacle.—Is 250x150 feet, covered by a great dome without central support and contains a pipe organ 58 feet high on which free recitals are given to visitors from time to time.

Lion and Bee Hive Houses.—Buildings formerly occupied by Brigham Young and his family.

Amelia Palace.—Mansion erected by Brigham Young for his wife, Amelia Folsom.

Salt Lake City and County Building.—Built of native gray sandstone at a cost of \$1,000,000.

Liberty Park.—A beautiful forest inclosure with 100 acres of ground space.

Ensign Peak.—Rises 1500 feet above Salt Lake City and affords an excellent view.

Fort Douglas.—A well improved military post 3 miles east of Salt Lake City, reached by two street car lines.

Canyons.—City Creek, Parley's and Big Cottonwood are delightful drives from Salt Lake City. Provo and American Fork canyons to the South and Ogden canyon to the north present some of the most magnificent scenery to be found in the world.

Park City.—The oldest mining camp in the State, has vast underground workings and has produced \$50,000,000 in silver, lead and gold. It has a drainage tunnel piercing a mountain range and an aerial tramway.

Bingham.—Seems to be destined to become the greatest copper producing camp in the world. It has in course of erection some of the greatest reduction plants in the West. It is 25 miles from Salt Lake City by rail.

Warm Springs.—Two bathing resorts north of Salt Lake City are fed by springs of boiling hot water possessed of remarkable curative powers.

Hot Pots.—A peculiar lime formation full of natural bath rooms and a supply of natural hot water at Heber, 50 miles from Salt Lake City.

Ogden Hot Springs.—A natural sanitarium situated a few miles from Ogden.

Natural Bridges.—Three massive sandstone arches spanning unfathomable canyons in San Juan county, a region of weird and primitive grandeur.

Cliff Dwellings.—Southeastern Utah is filled with monuments of a forgotten past, the homes and handiwork of the extinct Cliff Dwellers. These are oftimes in the condition they were left centuries ago by their owners and are of immense interest to the scientist.



Grand Canyon.—This Titanic gorge through which flows the Colorado river, presents some of its most inspiring aspects within the confines of Utah and is safely navigated for a short distance by a line of small steamers.

Point Sublime.—Reached by Utah routes is awful in its sublimity and is yearly attracting more tourists to Southern Utah.

Lakes.—Besides her famous salt sea Utah is well provided with fresh water bodies. There is Utah lake, 125 miles in extent; Bear lake, Fish lake, Panguitch lake, Peffer's lake and countless unnamed crystalline lakes in the mountains.

Summer Resorts.—The Oaks and the Hermitage in Ogden canyon, Ogden Sanitarium at mouth of Ogden canyon, Brighton, up Big Cottonwood canyon, Geneva on Utah lake, Castilla in Spanish Fork Canyon are all provided with excellent hotel facilities and surrounded by scene of inspiring splendor and sublimity.

Tourist Accommodations.—Salt Lake, Ogden, Logan, Provo and even the smaller towns of Utah are plentifully supplied with good hotels. In the two first named are a number of large houses containing 200 and 300 rooms and all the conveniences found in the palatial hostelries of New York and Chicago.

What the Home-seeker Wants to Know. Things that are of but passing interest to the tourist become of prime importance to the permanent resident. Climate, health, social conditions, educational advantages, the cost of property, the oppor-

tunities to earn a living, future prospects of business—all of these things are of deep concern to the man who desires to take up his abode in a new country. The chief advantage offered by Utah to the settler is room.

Density of Population.—The population of Rhode Island to the square mile is 407; of Massachusetts, 348; of New Jersey, 250.3. Utah has 3.4 persons to the square mile. With its diversified resources it is capable of supporting as many inhabitants as Rhode Island, Massachusetts or New Jersey, therefore the difference in population to the square mile represents the growth of industry that is sure to come to this State as the overcrowding of the East forces more and more families to seek new homes away from the intensified competition of bread.



Nature's Cash Drawer.

METAL MINING INDUSTRY.—Utah is first among the states in the production of silver and fourth in production of gold. Two hundred and eight minerals have been found in the State. Gold, silver, copper, lead, coal and salt are the chief mineral products. It is estimated that one billion dollars worth of ore is exposed or blocked out in the mines. Since 1869 Utah's mineral output has been:

Gold, from 1877 to 1903	\$ 35,758,213.26
Silver, for same period	161,862,224.48
Lead, for same period	53,285,513.74
Copper, for same period	18,146,707.53

Output for 1903:

Lead	\$ 5,908,524.80
Copper	5,061,329.38
Gold	5,158,500.00
Silver	10,338,354.35
Total	<u>\$26,407,008.53</u>

Output for 1904:

Gold	\$ 6,518,036.46
Silver	7,744,979.05
Copper	7,221,756.03
Lead	5,020,550.00
Total	<u>26,505,321.54</u>
Total output of metals in Utah..	\$327,825,160.55

Dividends.—The growth of mining in Utah is shown by the record of the past six years of output and dividends:

Year.	Output.	Dividends.
1899	\$12,025,540.05	\$ 272,470.00
1900	16,011,290.78	3,060,401.00
1901	19,070,736.00	4,891,225.00
1902	21,016,885.00	5,025,500.00
1903	... 26,467,008.53	4,769,016.00
1904	26,505,321.54	4,156,000.00

The slight decrease in dividends in the year 1903, as compared with 1902 was due to a decline in the price of metals.

Forty-one mines in Utah have paid in dividends to 1903 \$53,887,910. In 1903 Utah mines paid known dividends amounting to \$4,769,016.

Copper Production.—The production of copper in Utah is steadily increasing. In 1898 the copper output in dollars was \$426,000; in 1899, \$1,246,000; in 1900, \$2,514,000; in 1901, \$4,227,551; in 1902, \$3,056,721; in 1903, \$5,001,329; in 1904, \$7,221,756. Plans outlined for 1905 include two reduction plants which will handle 17,000 tons of ore a day, necessitated by the disclosure of vast bodies of copper ore in the Bingham mines. This will double or treble the output of ore in Utah and place the state in the front rank as a copper producer.

Mining Districts of Note.

PARK CITY AND ALTA.—Include a territory 20 miles square at the head of the Little Cottonwood and Big Cottonwood canyons. Park City has paid \$28,849,800 in dividends, which is 53 per cent. of the total for the State. The principal mines of the camp are the Ontario, Silver King, Daly-West, Kearns-Keith, New York Bonanza, American Flag, Daly Judge, Creole, J. I. C., and Naildriver. The Park ores are generally a silver-lead galena lying mainly in beds between lime and quartzite and ranging in value up to \$200 a ton. Alta, just west of Park, has produced \$13,000,000 in ore and the camp is now regaining its lost prestige. Two large mills have been erected there within the past two years and the output of ore and concentrates is constantly increasing.

American Fork.—Located in the same zone as Park and Alta, is very slightly developed, but is shown to have ore of high values and, seemingly, in paying quantities. ,

Bingham.—Situated 25 miles southwest of Salt Lake City, will, when present improvements are carried out, be the largest mining camp in Utah and probably the largest copper camp in the world. The production of ore in 1903 was 2000 tons a day. During the opening months of the present year the production averaged 3,435 tons a day. The men employed numbered 1967. In one of the properties is a solid block of copper producing rock known to be 2,500 feet by 3,000 by 500 feet in depth. Steam shov-

el mining is being inaugurated and this makes necessary the erection of several reduction plants having capacities varying from 6000 to 10,000 tons a day. One of these is to be erected on the shore of Utah lake and another south of Salt Lake.

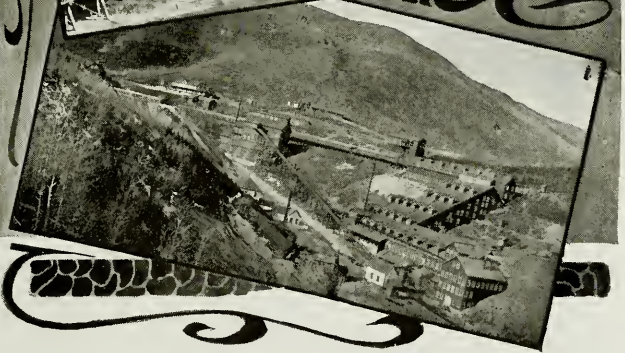
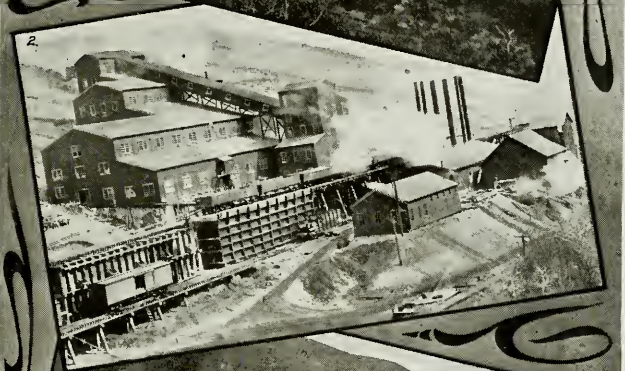
Stockton and Ophir.—These camps are on the western slope of the Oquirrh range opposite Bingham and employ about 400 men. Drain tunnels and milling facilities costing hundreds of thousands of dollars have been completed in the past year and a continuous increase of production will be noted from this time on.

Mercur.—Fifty miles by rail southwest from Salt Lake City is Mercur, exclusively a gold camp. The district has given to the world more than \$12,000,000 in gold. It possesses a mill with a capacity of 1,200 tons a day. It also contains the only quicksilver distilling plant in the State. The mercury has only recently been saved as a by-product, but is found to be highly profitable. About 400 men are employed at this camp.

Tintic District.—Is 85 miles by rail southwest of Salt Lake City. The principal towns of the district are Eureka, Mammoth, and Silver City. The dividends paid by the mines of the district up to 1903 amounted to \$12,292,450. The ores of the district are silver and lead with some copper.

Gold Mountain.—A gold producing district 200 miles south of Salt Lake City, Kimberley is its principal town. The Annie Laurie, the original mine of the district, has a mill with a capacity of 350 tons a day, employs over 200 men and, up to 1905, had declared dividends to the amount of \$390,000. About 350 men find employment in the district.

Frisco.—One mine in this district has paid in



CYANIDE CONCENTRATING MILL, MERCUR.
UTAH COPPER COMPANY MILL, BINGHAM.
SILVER KING AT PARK CITY.

dividends \$5,400,000. But recently a plant has been erected which adds zinc to the commercial products of the State. It has made this by-product a considerable item in the profits of the company. The characteristic metals are silver and lead.

Other Districts.—Among these are Deep Creek, silver; Marysvale, gold; Stateline, gold; La Sal, gold; Copper Mountain, copper. These are a few of the numerous undeveloped and partially developed mining districts scattered throughout the State. They offer great inducements to the prospector and the intelligent investor.

Where Wealth is Made.

SMELTING AND MILLING.—The seven smelters of Utah employ 2000 men and have a capacity in excess of 3000 tons daily which is being unfailingly supplied by the mines. American Smelting & Refining Co., 750 men; Highland Boy, or Utah Con., 250 men; United States, 500 men; Bingham Con., 250 men, all being in Salt Lake valley. The Yampa, at Bingham, 100 men, the Majestic at Milford, 125 men and the Utah Eastern & Copper Co. in Washington county, 40 men. Improvements, additions and new plants are under way, many to be completed in 1905, that will increase the present capacity more than five fold. Closely allied with the smelting industry are the milling propositions for handling gold ores and for concentration. Of these every camp boasts from one to a half dozen and the demand for suitable treatment processes is never fully satisfied.



HIGHLAND BOY TRAMWAY, BINGHAM.
CONSOLIDATED-MERCUR MILL, MERCUR.
U. S. SMELTER, SALT LAKE VALLEY.

Giants Still in Prison.

COAL.—There are 138 coal mines in Utah. The coal belt enters Utah south of Evanston, Wyo., and continues in a zig-zag course until it leaves the state at the southwestern corner of Washington county. It is over 600 miles long, from ten to 25 miles wide and covers many thousand square miles of land. Coal is mined in Carbon, Summit, Grand, Sanpete, Emery and Uintah counties. The output of coal up to 1885 was 1,806,120 tons; to 1894, 4,577,546 tons and up to 1904, 13,376,980 tons. Carbon county produces 95 per cent of the coal of the state. Utah produces more coal than is consumed by the people of the State. In 1903 343,314 tons were imported and 817,954 tons exported.



IN ZION'S BACK YARD.

Wonders of the Under-World.

ASPHALTUM.—Gilsonite, elaterite, ozokerite and other hydro-carbons occur in the Uintah and Uncompahgre reservations. The area of the deposits has been estimated at from 1000 to 10,000 square miles. These lands will be thrown open for settlement Aug. 28, 1905. Asphaltum, used principally for street paving, occurs in these regions in practically inexhaustible quantities in limestone and sandstone formations and in flowing springs and lakes. Its quality is equal to that of any in the world and is much superior to the artificially mixed asphalt used in most cities, the blending of sand and oil having been done here by nature. Aside from a small amount mined in California practically all the asphaltum used in the United States is imported from the island of Trinidad. Gilsonite is a hydro-carbon of great commercial value. It is used in the manufacture of black Japan and other varnishes, in making insulating compounds and for various other purposes. The output in 1892 was worth about \$400,000. The largest known vein is 40 feet wide and 20 miles long. The prevailing price is \$55 and \$60 a ton, f. o. b. at Price, Utah. The principal markets at present are Denver, St. Louis, Louisville, Chicago, Detroit, Cleveland, Akron, New York, Philadelphia, London, Paris, Hamburg and Berlin.

Clays—Utah is famed for its rich and beautiful clays. Almost every county has a deposit of this kind. Kaolin of the finest quality is found at Draper in Salt Lake county from which choice pot-

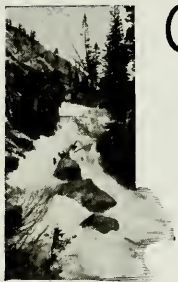
tery has been made in an experimental way. Brick clays of every tone and color exist throughout the state. Salt Lake City manufactures from 35,000,000 to 40,000,000 brick annually.

Iron.—There are iron deposits in Cache, Weber, Wasatch, Morgan and other Utah counties, but Iron county enjoys the distinction of possessing the largest iron deposits in the world. The ore is magnetite and hematite and occurs in a belt 15 or 20 miles long and 3 or 4 miles wide. A Pennsylvania expert estimates the body of iron ore in one section of Iron county at 400,000,000,000 tons. The completion of the Los Angeles road, furnishing an outlet to the Pacific coast, recently caused great activity in the purchase of lands in this territory and it is thought that a Colorado company will erect furnaces on Green river, where coke is available for the largest of enterprises.



THE MONUMENT CORNER

Waiting for the Harness.



CHEAP POWER.—In her canyon streams Utah possesses wonderfully cheap and effective power. At almost nominal cost electrical energy can be supplied after a generating plant is installed. This method of supplying power has proved so much cheaper and so much more satisfactory than any other that it is in hundreds of instances taking the place of steam. Scores of mining companies have installed their own electrical plants, or

purchase power from the many efficient companies now in the field. The demand for this kind of power is evident from the number of plants contemplated or under construction at the present time.

Nerves of the Nation.

RAILROADS.—Utah has 1856 miles of railroad operated by fifteen railroad corporations whose property has an assessed valuation of \$16,532,131. The railroad mileage of which Utah is the natural center is 4000 and the rolling stock used in this territory comprehends 388 locomotives and 9,523 cars. The recent completion of the Salt Lake-

Los Angeles road, the anticipated air line from Denver, already in course of construction, and the Western Pacific, from Salt Lake to San Francisco, for which the bonds have been subscribed twice over, will make Salt Lake the greatest railroad center in the West. The official railroad program for 1905 includes extensive construction by the following companies: Western Pacific; Denver, Northwestern & Pacific; Interurban system; Salt Lake Southern; San Pedro, Los Angeles & Salt Lake; Oregon Short Line; Salt Lake & Ogden; Newhouse, Copper Gulch & Sevier; Uintah; Rio Grande Western. Twenty-one of Utah's 27 counties are touched or crossed by railroad lines.



In Touch with Consumers.

MARKETS.—The situation of Salt Lake and Ogden, Utah's central cities, in the heart of the great basin with every transcontinental line in this territory converging thereto, with an extensive system of spurs and branches radiating from them and with no rival trade center nearer than 500 miles, gives these cities a dominating position in a commercial region greater geographically than any other in the United States. This territory reaches from the Coeur d'Alenes in Idaho to the Colorado river in Arizona and from Western Colorado to the Sierra Nevada mountains. Its area is estimated at 300,000 square miles of which 84,000 square miles are in Utah, 50,000 in Idaho, 50,000 in Wyoming and 116,000 in Nevada. The population of the tributary area, which is rapidly being augmented is 600,000, distributed as follows: Utah, 330,000; Idaho, 200,000; Nevada, 30,000; Wyoming, 40,000. The distances to the nearest rival trade centers are:

Denver	629 miles.
Butte, City, Mont.	434 miles.
Spokane, Wash.	922 miles.
Portland, Ore.,	902 miles.
San Francisco	823 miles.
Los Angeles, Cal.	773 miles.

The largest city, aside from Salt Lake and Ogden, in this trade domain is Boise City, in Idaho, which has a population of 10,000 or 12,000 and only

one railroad. In this territory are about 50 mining camps or prospective districts and numerous railroad towns all of which are large cash customers.

Freight Rates.—Local freight rates favor the central points in this territory. Therefore Utah merchants, manufacturers and farmers can supply their products to better advantage than outside competitors. For this reason the jobbing trade of Salt Lake City alone in 1904 was \$40,000,000 and that of Ogden fully half as great. Dairy and farm products, fruits, sugar, salt and coal are shipped to various points outside of Utah in the Great Basin in quantities aggregating many millions of dollars every year. The manner in which rates operate in favor of local shippers is illustrated by figures furnished by the promoters of a packing plant in Salt Lake City. The average freight rate in this territory to Salt Lake for livestock is \$35 a car, ranging from \$20, the charge from Utah valley, 50 miles away, to \$70 from Shoshone, Ida., 250 miles away. Rates from the same points to the Missouri River packing houses range from \$130 to \$155, and to Denver, from \$100 to \$120 a car. For meats shipped from the East to points within this territory the railroads exact \$1.18 to \$1.40, local freight added, while from Salt Lake the rate is 65 cents to points within 200 miles. These figures will hold good on all commodities. Of the 25,000 tons of sugar manufactured in Utah last year the bulk of the 15,000 tons sent out of the State was taken by Utah's tributary country. Of the 100,000 pairs of shoes made in Utah last year a very large proportion were sold in the same area, but the Utah factories were unable to turn out enough shoes to supply more than one-tenth of the number of pairs purchased.

Trade Expansion.—This intermountain market



CITY AND COUNTY BUILDING.
SALT AIR PAVILION.

is entering upon a cycle of stupendous expansion. The opening of the Goldfield, Kawich, Bullfrog, El Dorado canyon and Cane Springs districts in Southern Nevada and the revival of mining in Eastern Nevada and Southern and Western Utah accompanied by railroad building, the reclamation program in Utah, Idaho and Wyoming, which will double the irrigated areas of all three states within a few years, the opening of the Uintah Indian reservation, the expansion of dry farming and the completion of mill, smelter and mining projects in Utah which will more than quadruple the present output of metals, within two years will create for Utah a greater market by far than she is now able to take care of.

Exports of Manufactured Products.—Five breweries shipped 19.7 of their total product, value \$673,837.58, out of the State in 1904. Eleven out of 14 canneries shipped 51.5 of their product, worth \$700,004.60, out of the State. Seventeen cigar factories shipped 45 per cent., worth \$204,826.06. Eighteen clay manufactories shipped 10 per cent., worth \$251,229.51. Forty-two creameries shipped 21 per cent., worth \$159,247. Fifty-eight flour and grist mills, with a product of \$1,164,726.99, exported 6 per cent. Eleven woolen and knitting factories, producing \$567,833.89, exported 47 per cent.





RESIDENCE OF M. H. WALKER.
RESIDENCE OF THOMAS KEARNS.
RESIDENCE OF A. W. McCUNE.

Solid as the Rock.

INDUSTRIAL DIVIDENDS.—The following dividends were paid in April, 1905: Amalgamated Sugar Co. preferred, 1 1-2 per cent., common, 2 per cent.; Consolidated Wagon & Machine Co., preferred, 1 3-4; Deseret National Bank, 3 per cent.; First National Bank of Ogden, 3 per cent.; First National Bank of Murray, 1 1-2 per cent.; Home Fire Insurance Co., 2 per cent., Lehi Commercial & Savings Bank, 1 1-2 per cent.; Ogden Savings Bank, 2 per cent.; Provo Commercial & Savings Bank, 2 per cent.; Rocky Mountain Bell Telephone Co., 1 1-2 per cent.; State Bank of Utah, 2 1-2 per cent.; Thatcher Bros. Banking Co., Logan, 2 per cent.; Zion's Savings Bank, 2 per cent.; Utah County Light & Power Co., bonds, 3 per cent.; Z. C. M. I., semi-annual dividend, 4 per cent. The receipts of the Z. C. M. I. for the year reached a total of \$4,246,896.03. The Utah Sugar Co. has since paid \$90,000 dividends on preferred and common stock.



The Source of All Life.

FARM AREA.—Utah has 21,410 farms, the average farm containing 77.2 acres, or a total acreage of 1,653,955. A little more than one per cent. of the total surface area of the State is cultivated. The unimproved area is covered with grass and forage and supports two and a half million sheep, the greater portion of 245,771 head of cattle and a part of Utah's 73,598 horses and mules.

Crops.—Utah has three climatic zones. In the southern part of the State grapes, peaches, figs, almonds, pomegranates, cotton and tobacco grow luxuriantly. In the northern valleys wheat, oats, barley, sugar beets, vegetables, apples, cherries, grapes, peaches, pears, apricots, plums, berries thrive. In the central zone hardy cereals, vegetables and fruits are successfully grown. Alfalfa does well everywhere and is the staple farm product of the State, yielding three and four crops annually in Southern Utah; two and three in the north and two in the upland districts in the central portion of the State. Analyses by the Agricultural Experiment station show Utah's soil to be of the richest. By irrigation soil originally barren has been made to produce such crops as this:

Sugar Beets, per acre	33 I-3 tons.
Alfalfa, per acre	7 I-2 tons.
Potatoes, per acre	900 bushels.
Onions, per acre	1100 bushels.
Peaches, per acre	\$400 net.
Cherries, per acre	\$975 gross
Raspberries, per acre	\$800 gross.
Strawberries, per acre	\$800 gross.
Grapes, per acre	\$1200 gross.
Wheat per acre	65 bushels
Oats, per acre	80 bushels.

The average yield of wheat the acre is 19.5. That is 5 1-2 bushels more than the average in the wheat growing states of the Middle West. The crop average the acre is: Oats, 37.2 bushels; barley, 32.4 bushels; rye, 12.4; corn, 19.4; potatoes, 141.2; sugar beets, 13.05 tons; sorghum, 90 gallons; alfalfa, 2.44 tons; tame hay, 2.07 tons; wild hay, 1.3 tons; fruits, \$33.50; grapes, \$48.35; berries, \$79.40. On Utah's 1 per cent. of cultivated lands was raised in 1903, \$24,546,000 worth of products, or \$43.30 the acre. This includes the value of the range stock sold and the wool clip. From this 1 per cent. of land the State and part of the tributary country is fed.

Little Drops of Water.

IRRIGATION.—The productivity of the land is largely due to the system of irrigation adopted by the early settlers, which has been imitated by nearly all the Western States. Utah's half million acres of cultivated lands are subjected to periodical surface flooding from mountain streams, valley rivers and the stored waters of reservoirs. The farms are drenched from one to four times a year according to the nature of the soil and the humidity of the season. This is accomplished by means of a system of co-operative canals and head-ditches. Virtually all the private reservoirs, streams and canals in Utah are owned and operated co-operatively, so the



only cost that falls on the farmer is the labor of maintaining the conduits and turning the water upon his fields at proper intervals. With scientifically constructed

canals and good head-ditches the latter is an

easy task and involves but a fraction of the work devoted in wet climates to cultivating and harvesting. Irrigation places the husbandman beyond the vicissitudes of the weather and gives the crops the benefit of the moisture and sunshine at the same time. Under the reclamation act passed by Congress the United States Government loans money to the prospective occupants of the land at the rate of \$10 an acre, for the construction of reservoirs, canals and ditches. The settlers have ten years in which to repay the loan and then become the owners of the water in fee simple, having only to bear the cost of maintenance. The fund is self-perpetuating. When the loan for one project is returned it is available for use in another. There are 351 canals in Utah owned co-operatively or by private corporations capitalized at \$28,029,932. Incomplete tables from the State Census Bulletin for 1904 show that 297 of these are irrigating 406,121 acres of land and have canals covering 631,824 acres, the construction of which cost \$3,725,001.50, or an average of \$5.89 an acre. Maintenance costs annually \$178,904.17, or 44 cents for each acre of land irrigated.

Government Reservoirs.—When all the reclamation projects planned by the general government shall have been completed the cultivated area of Utah will be practically doubled. They include:

Strawberry Valley reservoir	50,000 acres
Bear Lake reservoir	200,000 acres
Utah Lake reservoir	50,000 acres
Weber River reservoir	100,000 acres

The reclamation program covers lands in the northern part of the State where the climate and soil conditions are best, where the bulk of the population is massed and where the markets are most accessible. The Strawberry valley project includes a dam

across the south end of the Strawberry valley, east of Utah valley, 350 feet long and 45 feet high, which will impound the waters of Strawberry river, forming an artificial lake covering ten square miles. The outlet will be through Spanish Fork canyon into Utah valley by means of a tunnel 20,000 feet through the mountain range. It will furnish water enough for 50,000 acres and will cost about \$1,000,000. The land to be reclaimed lies in the midst of cultivated districts, but is unused on account of scarcity of water. It is highly productive, especially in sugar beets, fruits and grain. Watered land in the vicinity sells for \$100 and \$150 an acre. Work has already begun on the tunnel. The Bear Lake project involves the storage of all the surplus water of Bear river, the largest stream in the State with the exception of the Colorado. It will reclaim 200,000 acres of highly fertile land. Bear lake, situated on the line between Utah and Idaho, flows by a natural outlet into Bear river. This outlet will be dammed and a canal from far up Bear river above the lake will divert the flood waters of the stream into the reservoir thus created. The project will cost \$5,000,000. It includes the main dam, three diversion dams and 150 miles of canals. Three states are interested, but the land to be reclaimed lies mainly in Utah. It consists of areas along Bear river in Marsh, Western Cache and Malad valleys. The land is open to settlers and is provided with the best railroad facilities. Improved land along Bear river is now selling for \$50 an acre.

The third project is the Utah Lake enterprise. Thirty streams rush down from the Wasatch mountains and spread over the 125 square miles of surface constituting Utah lake. Three-fourths of all this water is lost by evaporation and the remainder, flow-



WHEAT FIELDS IN WEBER COUNTY.
"WHEN THE FROST IS ON THE PUMPKIN"
BERRY PICKERS NEAR OGDEN.

ing into the Jordan river, waters Jordan valley. The Jordan outlet is 11 feet higher than the bottom of the lake and the plan is to make an 11-foot cut so that the lake can be entirely drained in the summer and the water saved from evaporation. A dam will also be constructed to impound the spring water and enough water will be saved in this way to irrigate 50,000 acres in the northern part of Utah county and in the southern part of Salt Lake county.

The Weber River project is designed to bring under cultivation 100,000 acres. The Weber river is second in size only to the Bear. Its normal flow will be diverted by a short canal into Provo river and will be used to reclaim the broad stretches of fertile lands north of Lehi, Utah county, and in the southern portion of Salt Lake county. The spring high water will be controlled by a dam near Hennifer, Summit county, from which a stream will be released during the irrigation season far greater than the Weber river during low water and which will, in all probability, supply sufficient water for all purposes in Weber county.

Additional minor reservoir schemes are in view in the southern part of the State. A dam is planned across the Sevier river below Dover, which will form an immense reservoir and will open for occupation unlimited areas of land near Deseret and Leamington. The fruition of the entire reclamation program will double the agricultural population of Utah and will afford excellent opportunities for home-seekers.

Battle with the Desert.

DRY FARMING.—After a thorough investigation Prof. John A. Widtsoe, director of the State Experiment farm, and Prof. Lewis A. Merrill, agronomist of the farm, declare that Utah has 20,000,000 acres that will grow the following crops without irrigation: Wheat, oats, barley, rye, alfalfa, corn, speltz, sugar beets, grasses of various kinds, kaffir corn, barnyard millet, vetch and dwarf Essex rape. This conclusion was the result of experiments at six dry farm experiment stations established by the State legislature and operated in 1904. They are located in Iron county, where the precipitation of moisture was 13.14; in Juab county where it was 11.11; in San Juan, where it was 10.26; Sevier where it was 10.58; Tooele where it was 16.56; Washington, where it was 11.94 inches. Every quarter of the State, every kind of soil and every variety of the State's climate was represented. The result of the first year's experiments was a complete success with every crop, as follows: The yield per acre of spring wheat ranged from 8 to 21.25 bushels.

Fall wheat	9.6 to 23.83 bu.
Oats	8.91 to 36.01 bu.
Barley	5.13 to 34.90 bu.
Rye	11.55 to 14.04 bu.
Speltz (an arid grain) ...	17.68 to 23.55 bu.
Corn	25.93 bu.

All spring-planted alfalfa without exception de-

veloped an excellent stand. Surprising results were attained in sugar beet growing, many of the beets weighing 21-2 pounds and more. Arid farming, however, has been in vogue in what was supposed to have been favored localities in Utah for more than 20 years with great success at such places as Bear River City, the sand ridges between Ogden and Bountiful and in Cache valley. Here 20 bushels of wheat are raised to the acre and other crops in proportion. In Western Cache valley the dry farms are cultivated up the hillsides as far as machinery can be taken. The year 1905 makes a pioneer movement as a result of the demonstrations above spoken of. It has been scientifically proved that 6 inches of rain will mature any of the crops mentioned under this head and, as the average precipitation for Utah is about 12 inches a year, it must be admitted that dry farming here is thoroughly practicable. In the great untaken stretches of land in Western Utah water for all culinary, garden and livestock purposes can be obtained by the use of artesian wells. These wells have already proved an unfailing source of supply in Tooele, Juab, Millard, Beaver and Iron counties where most of these lands lie.



Many Millions in Sweets.

SUGAR BEETS.—This crop is bringing more money to the farmers of certain sections of Utah than any other. The rapid expansion of the beet sugar industry affords unusual opportunities for home-seekers. Beginning in 1891, when 1,112,800 pounds of sugar was produced in Utah, the industry has grown until the production, in pounds was: In 1896, 9,150,000; in 1901, 32,000,000; in 1902, 38,000,000; in 1903, 47,500,000; in 1904, 56,200,000. In 1904 the production of sugar by factories was:

FACTORY	BEETS TONS	PRODUCTION POUNDS	ACREAGE BEETS
Lehi	112,200	24,750,000	10,140
Garland	31,800	7,250,000	2,660
Ogden	68,300	15,150,000	6,350
Logan	40,500	9,050,000	3,550
Total	252,800	56,200,000	22,700

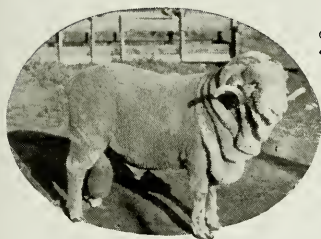
The estimated value of the output was \$3,600,000, \$1,100,000 of which was paid to the farmers, or at the rate of almost \$49 an acre. The Utah consumption of sugar is but 10,000 tons, so 15,000 had to be shipped from the State. This represents a value of \$2,130,000. The Utah Sugar company has declared dividends 12 of the 15 years of its existence. A new factory will be established in Lewiston near the Idaho line this year. The Garland, Ogden and Logan factories will be enlarged. The Lehi factory will spend \$100,000 for improvements and the

acreage will be increased everywhere. From 2,660 in Garland to 7,000; from 10,140 near Lehi to 12,000 and proportionately elsewhere. A factory will probably be begun in Sanpete or Sevier county this year. George Austin, agricultural superintendent of the Utah Sugar Co. furnishes the following figures as to cost and profits of the farmers in beet raising: The average yield per acre of beets in Utah is from 12 to 15 tons and runs as high as 25 tons. The factories pay \$4.50 a ton, amounting, on an average, to \$50 an acre, but to more than twice that in instances where careful cultivation is practiced. It cost \$35 a ton to produce, harvest and deliver the beets, as follows:

Plowing	\$ 2.50
Preparing seed bed	1.50
Seed and planting	2.75
Thinning	5.00
Three horse cultivations	1.50
Three irrigations	1.50
Topping	5.00
Hauling to factory	6.00
Two hoeings	4.00
Fertilizing	2.50
Water	1.00
Total	<u>\$35.00</u>

Farmers, on an average, cultivate from 10 to 15 acres. As all the above items of expense are labor costs, and the farmer and his family can do the work, they make all the way from \$150 to \$1,500 on this one crop. Beets will grow on heavy clay, loam, or sand. Reclamation projects are in the vicinity of the factories and will throw a great acreage open to sale.

Life on the Range.



STOCKGROWING —There were in Utah in 1903, 245,159 head of cattle, 73,508 horses and mules, and 45,718 hogs. The monopolization of the public ranges by the sheep

is creating a revolution in cattle raising. Formerly the 45,000,000 acres of Utah public domain afforded a range for the cattle of this State of a quality to keep them summer and winter without shelter or care. Gradually the cattle are being driven to the pastures and cultivated areas. A fine grade of stock is taking the place of the former scrubby range cattle. Winter feeding is becoming a regular feature of the industry and better prices prevail. Cattle largely range during the summer and are fed and sheltered during the winter months. An acre of grass land will, on an average, support two head of grown cattle a year. Young cattle increase in value about \$10 in one year, or \$20 an acre. Deducting \$5 an acre for deadheads this leaves a profit of \$15 an acre in turning the products of pasture lands into cattle. Alfalfa costs from \$3 to \$5 a ton. A grown animal will eat half a ton, or about \$2 worth a month, so that winter feeding

costs from \$4 to \$6 a head for cattle. Mixed herds of old and young cattle are selling now at \$18 the head. Utah has an unlimited market for her livestock in Denver, Chicago and Missouri river points. A packing house is planned for Utah which would furnish local markets.

Hogs.—Hog raising has proved remunerative in Utah, although the industry is still in its infancy. Hogs, when not being prepared for the market, do well on alfalfa. Five pounds of wheat, Utah's staple hog feed, worth 5 cents, will produce two pounds of pork worth 10 to 20 cents. The unlimited demand for pork in and around Utah makes hog raising an inviting field.

Sheep and Wool.—The sheep industry appeals to the investor rather than to the farmer. To attempt to handle less than 2,500 sheep, worth \$10,000, on the great free range of Utah would be unwise. Nevertheless sheep-raising has been a profitable occupation here, as is evidenced by the growth of the business which has reached in round numbers in 1900, 3,800,000 sheep with a total earning value of \$7,800,000. The wool clip for this year is estimated at 20,000,000 pounds, for which the wool growers received \$3,600,000. Compare this with \$1,800,000 in 1900 and \$1,500,000 in 1903! Wool is now selling at from 14 to 22 cents a pound, ewes have gone up to \$4 a head and sheared lambs to \$2.75. The total income on a sheep from wool averages a little more than \$1 a year. With a flock of about 3000 head and a free range there is a handsome profit left for the owner after the herders, dippers and shearers have been paid off. Utah is full of men who have become wealthy in the sheep business.

Fruit Raising for Profit.

HORTICULTURE.—There are in Utah 22,512 acres of land devoted to horticulture. The value of the crop on the 12,809 acres of orchards reported by the State Board of Statistics was \$425,886, or \$33.25 an acre. The same authority reports 343 acres of vineyards with a product valued at \$16,586, or \$48.35 an acre. It also reports 776 acres of small fruits valued at \$61,679, an average of \$79.40 an acre. This is not a fair representation by any means of the condition of horticulture in Utah. The year 1903 was one of the worst years for fruit growing in the history of the state, the crops suffering great damage from frost and other causes. Normal years show a profit of over \$100 per acre on fruits. Joseph H. Parry, secretary of the State Board of Horticulture, says in his biennial report for 1903-04: "Figures of actual returns from various sections of the state are hard to believe. If devoted to the production of strawberries an irrigated acre will yield an annual crop worth from \$300 to \$500.

Raspberries, from \$300 to \$800.

Peaches, from \$200 to \$300.

Cherries, \$300.

Apples, \$350 or more.

Grapes, from \$200 to \$500.

The grapes are used either as fresh fruit or are converted into raisins. An extensive apple grower in Salt Lake county of thirty years' experience, says that 300 apple trees of bearing age, well cared for, will yield their owner \$10 a day every day in the year, including Sundays and hol-

idays. From the figures given above, it is clear that an acre of fruit will purchase 500 bushels of wheat or 600 tons of hay."

The banner counties in fruit raising are: Utah, 6,000 acres; Davis, 5,704; Salt Lake, 2,650; Weber, 2,312; Sevier, 1,000. In the southern part of the state conditions are favorable for raising the citrus and semi-tropical fruits. The average income an acre from fruit is reduced throughout the state on account of the great number of orchards where negligent methods prevail. In the banner counties, where some careful cultivation is done, a great system of commerce is being built up. There are fourteen canneries in the four leading counties, which turned out last year:

Article.	Cases.	Tons.
Assorted fruit	26,000	600
Tomatoes	390,808	19,544
Peas	37,000	920
Beans	3,000	69
Pumpkins	2,500	60
Tomato ketchup	2,500	60

The canneries afford a ready and convenient market for the above products and their number is yearly increasing. In addition to the home consumption, these shipments were made by counties:

County.	Carloads	Value.
Box Elder	179	\$ 89,500.00
Weber	261	125,000.00
Utah	150	75,000.00

The mining camps and populated centers of Utah and neighboring states afford an unfailing market for Utah fruits. Utah alone has not been able to supply the home consumption, California being an active rival in the local market. Utah fruits grown as they are in a dry climate, where 90 per cent of the days are bright, are famed for their quality and flavor and sell in the Eastern markets at a premium. Many carloads were distributed in Eastern cities as far as Chicago last year.



EVERYDAY SCENES IN THE ORCHARDS NEAR BRIGHAM CITY.

Reduced to Figures.

PRODUCE PRICES.—Wheat, of which 4,000,000 bushels were raised in Utah in 1904, 65 per cent shipped to Colorado and Texas, brought 70 cents the bushel. Oats, insufficient for the local demand, brought \$1 to \$1.20 a hundred-weight. Barley, consumed by the Utah breweries, brought 85 to \$1 a bushel. Alfalfa, which averaged 6 tons to the acre on irrigated land and 2 1-2 tons on dry farms, was taken by stock-owners, the ruling price being \$8 a ton. Potatoes were 25 cents a bushel, butter 17.6 a pound, cheese 9.4, apples 75 cents a bushel, peaches 30 cents a box, tomatoes 4 cents a pound, cabbage 1 to 3 cents.

Cost of Land.—Land may be obtained either by entry or by purchase. Utah has 39,703,466 acres of unappropriated and unreserved land. Several million acres will be reclaimed by irrigation and 20,000,000 acres may be successfully dry-farmed. Of the 400,000 acres to be reclaimed by the Government within two or three years, about half may be homesteaded and the remainder, with water rights, purchased at from \$30 to \$150 an acre payable in 10 years. Any person who is a head of a family or who has arrived at the age of 21 years and is a citizen of the United States or has declared his intention to become such, has the right to settle upon, enter and acquire title to not exceeding 160 acres of public land by establishing and maintaining a residence thereon and improving and cultivating the land continuously for five years. On lands that require irrigation a citizen may enter and acquire 320 acres by paying down the sum of 25 cents an acre and within three years completing ditches and canals at a cost not less than \$3 an acre, and upon the payment of an additional \$1 an acre. Land may be purchased from individual owners at prices ranging from \$6 to \$30 in Southern Utah and from \$30 to \$200 in the north.

Good Work of the Cows.

DAIRYING.—Utah has 1,815 dairy farms with a total of 159,773 acres. On these farms are 15,000 dairy cows which have a value of nearly \$600,000. Range cattle and cows not used for dairy purposes bring the total to 55,000 cows. Total value of dairy farm property aside from cows is \$4,928,736. Utah's annual production of milk is 216,000,000 pounds, from which is made 5,500,000 pounds of butter and 2,000,000 pounds of cheese. Utah's seventy-one creameries and two condensed milk factories work up 80,000,000 pounds of cream annually. The total output of the creameries and canneries in 1904 was \$2,000,000, \$150,000 worth of dairy products being shipped out of the state for prices in excess of 23 cents per



pound for butter and 13 cents for cheese. The total value of the dairy products is estimated at \$500,000; the wages paid at \$41,665; number of persons supplying milk, 5,200, or nearly 16,000 pounds a person. An average of 69.2 cents the 100 pounds was paid for milk, or about \$490,000 in all. The price paid

a pound for cheese, 9.4 cents. A cow with proper care will give 40 pounds of milk a day worth at the creameries, after deducting the cost of delivery, 65 cents a hundred, about 25 cents a day, or about \$60 during the milking season. Utah possesses the advantage of the cheapest dairy food in the world, alfalfa. Figuring on the basis of alfalfa feed, a cow will consume a half ton a month or six tons a year, worth from \$2 to \$5 a ton; at \$4, making a total of \$24 and leaving a net profit of \$36 for each cow in a year. In a pasturage basis an acre will support two cows a year and produce \$120 worth of milk. The markets for Utah dairy products are excellent, extending into surrounding states. The consumption of this region for many years will be in advance of the progress of the dairy interests. Utah is now sending large shipments of butter and cheese to the Pacific coast at a transportation cost of 1 1-8 cents a pound; to Chicago on freight charges of 1 1-2 cents a pound, and to New York for 2 cents a pound. So profitable has been the dairy and creamery business that new factories are in the course of erection and the two big condensaries in Cache county, worth \$125,000, will add butter and cheese to their output.





HOLY CROSS HOSPITAL.

LATTER-DAY SAINTS' HOSPITAL.

JUDGE MEMORIAL HOME.

Hens Yield Big Returns.

POUULTURY RAISING.—Poultry does remarkably well in any part of Utah. The state contains 556,753 fowls valued at \$449,425, but there is such a demand for chickens and eggs that the importations from other states exceed by many thousand the home product. There were imported into Salt Lake City from Nov. 1, 1904, to Jan. 15, 1905, 288,000 dozen eggs worth \$56,600. Like conditions obtain in Ogden, Provo, Park City and other towns. The price of eggs in Salt Lake City from May, 1904, until April, 1905, varied as follows:

Per dozen: May, 20 cents; June, 25 cents; July, 25 cents; August, 25 cents; September, 30 cents; October, 30 cents; November, 35 cents; December, 35 cents; January, 40 cents; February, 40 cents; March, 30 cents; April, 25 cents. The average price a pound of dressed chicken for the year was 14 cents. The average price of feed for poultry for the year was: Wheat, \$1 a bushel; corn \$1.40 a hundred pounds; oats, \$1.40 per cwt.; bran and shorts, \$1.



Other Avenues Wide Open.

ALFALFA SEED.—This seed is used in Germany and Eastern industrial centers for the valuable oil it contains. The price, in comparison with other farm products, is fabulous and profits large. Alfalfa seed brings on the farm, from 9 to 13 cents a pound, or from \$7.20 to \$10.40 a bushel. The demand far exceeds the supply, so the above high prices have been maintained since the industry began. Alfalfa seed does not thrive on rich lands, but yields its best crops on lands slightly mineralized where other crops are comparative failures. Here, with but little irrigation, the alfalfa develops poorly as a plant, but is laden with seeds. All the way from 4 to 16 and even 20 bushels are raised on an acre, with but little care. This means an output of from \$28 to \$200 an acre, which is almost clear profit. In favored localities such as Deseret of Millard county and Gunnison, Sanpete county, whole communities have been made highly prosperous by this crop alone.

Honey.—There were 980,938 pounds of honey produced in Utah in 1903 from 16,857 stands, an average yield of 58.2 pounds of honey a stand. The universal alfalfa crop of Utah affords the best of all foods for the bees. Honey from the alfalfa blossom is conceded the finest flavored article on the market. Miles upon miles of alfalfa bloom throughout the bee season furnish an unlimited quantity of the sweets for the insects. Honey-raising has

proved to be a profitable business in Utah and is growing rapidly. The markets are not yet nearly supplied.

Truck Farming.—The productivity of the soil and the growth of mining and trade centers is destined to make truck farming one of the most profitable industries in Utah. At present the Chinese have monopolized the business around Salt Lake City and Ogden and in a very few years they amass enough wealth to live in luxury in their native land and pass the business on to their less fortunate countrymen.

Lumbering.—Utah has several strips of fine forest land, notably the one extending across the south-central part of the state which contains a timber supply for a generation. Railroad facilities are yet lacking and only enough lumber is produced here, as in other parts of the state, to supply the local trade. There are mills near Manti, Mt. Pleasant, Ephraim and Heber City, each turning out several million feet of lumber, but the bulk of Utah's lumber comes from the northwest and sells in Salt Lake and Ogden after paying freight charges of about \$10 for 1000 feet, for \$20 and \$25 a thousand. This gives an excellent opportunity to local lumber manufacturers of which they will no doubt take advantage as railroad facilities into the timber districts improve.



Opening of an Empire.

U INTAH RESERVATION.—



The opening of this reserve which will probably occur Aug. 28, 1905, affords the earliest and most favorable opportunity for the homeseeker. The reservation is in the northeastern corner of the State and contains 2,039,400 acres of which some 253,000 acres are of rich agricultural land from 4,500 to 6,000 feet above sea level. The remainder of the tract is excellent grazing and timber land. The Indians have for years raised luxuriant

crops of grain, fruit and vegetables and in contiguous counties cereals, sugar beets, potatoes, alfalfa, honey and small fruits are being raised in increasing quantities. It is the best watered district in the State having the Duchesne and Uintah rivers and their affluents. The region will, it is estimated, support 100,000 inhabitants. Its mineral resources include asphaltum, gilsonite, coal, copper and gold. It is certain to develop great lumbering, and stock-growing interests. Fifty thousand or more acres will be set aside for the Indians. The Utes are making rapid strides toward civilization and live on the friendliest terms with the whites. The nearest railroad outfitting points for the Uintah country are Price, Dragon and Heber City, their distances being from 82 to 100 miles.

Where Farmers are Trained.

AGRICULTURAL COLLEGE.—The State maintains an agricultural college at Logan, and, in connection, two, agricultural experiment stations and six experimental dry farms. The 119 acres comprising the college grounds are occupied by 20 buildings, where 600 students receive instruction under 58 teachers, in the following branches: Agriculture, domestic science, commerce, engineering, general science, manual training, domestic arts, mechanic arts, agronomy, horticulture, veterinary science, stock feeding, poultry raising, stock judging, entomology, irrigation and farm accounts. The inclosures are partially occupied by horses, cattle, sheep, hogs and poultry and most of the ground is devoted to experimental farming. Free bulletins, detailing the work of the experiment station are sent to farmers or others. The entrance fee to the college is \$2.50 and board and lodging may be obtained by students at from \$2.50 to \$3.50 a week.



LATTER-DAY SAINTS' UNIVERSITY,
AGRICULTURAL COLLEGE, LOGAN,
UNIVERSITY OF UTAH,

Outlook for the Bread Winners.

WAGE EARNERS.—There are in Utah 12,000 wage-earners engaged in manufacturing pursuits, 6,700 engaged in mining, milling and prospecting, 2,000 employed at the smelters, 2,500 in coal and hydro-carbon mining, 7,485 in trade, 3,591 on farms besides a great number in building and by the railroads. The industrial population of the state is about 40,000.

Wages.—Unskilled labor is paid from \$1.50 to \$2.50 a day. Skilled labor commands from \$3 to \$6 a day. The miner gets from \$2.50 to \$3.50 a day, drill men from \$2.75 to \$3.50 and car men and muckers from \$2.50 to \$3.00. In the smelters wages range from \$2 to \$3.50. An eight hour law is in force which forbids under-ground miners and smelter hands to work more-than 8 hours a day. In the building trades, among the bridge and structural iron workers, electrical workers, cigarmakers, printers, plumbers and other craftsmen remuneration ranges from \$20 to as high as \$50 the week. In seven industries reporting in 1903 wages for all employees, skilled and unskilled, averaged as follows: Breweries, \$2 a day; cannaries, 77 cents; cigar factories, \$2.45; clay products, \$2.45; creameries, \$2.30; flour and grist mills, \$2.19; woolen mills and knitting factories, \$1.45. In the mercantile pursuits the average wage for men in 1903 was \$11.60 a week. Farm hands receive \$30 a month and board.

Ownership of Homes.—The tendency among the

industrial population of Utah is toward the purchase of homes. Of the 689 building permits issued in Salt Lake City in 1904, 479 were for buildings costing less than \$2,000. This is significant as showing the desire of the workers to own their own homes and also the ease with which such ownership may be acquired. A good building and loan association has assisted many to improve vacant property.

Strikes and Lockouts.—Utah's labor population has always been peace-loving and contented. Although the organization of labor has progressed rapidly and union wages are generally maintained, there has been a remarkable absence of strikes in Utah while neighboring states have been torn with internal strife. One or two insignificant disagreements between the workers and the contractors in the building trades in Salt Lake, which were soon adjusted, an unimportant strike of 50 carpenters in Park City and the strike of the coal miners in Carbon county in 1904 sums up the labor disturbances in the industrial history of the state.



FIRST HOUSE IN SALT LAKE.

Where Utah Must Shine.

EDUCATION.—Utah ranks fourth in its percentage of educated persons. In 1870, 13 per cent of the population was illiterate; in 1880, 9.1 per cent; in 1890, 5.6 per cent; in 1900, 3.1 per cent. This is all the result of a splendid system of common and high school instruction. There are in the state 606 school buildings owned by the districts. Thirty have been built during the past year at a cost of \$197,952. The total amount of money expended in the state for school purposes in 1903 was \$1,548,759.10. With two counties yet to hear from, it is estimated that the expenditures in 1904 are \$128,964.93 more than during the preceding year. The total valuation of school property is \$3,534,772.42. In 1904 the teaching force numbered 1737 and there were 91,682 children of school age. The average salary of male teachers is \$74.84 a month, and of female teachers \$52.60. All of the schools have modern equipment. Text books are furnished free by the state. There are high schools in all of the cities and larger towns, whose certificates are accepted at the State University and at the various academies. The University of Utah is one of the most complete and best equipped in the West. It includes a school of arts and sciences, State school of Mines and State Normal school. It attracts students from many near by states and from as far East as the Mississippi river. It is located in Salt Lake and maintains a branch at Cedar City in Iron county. The State Agricultural college is described under another head. The merit

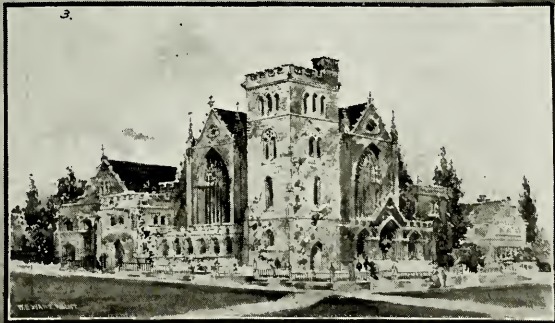


TYPICAL GRADE SCHOOL BUILDINGS IN SALT LAKE.

of Utah's schools was recognized at the St. Louis Exposition in 1904 when the Salt Lake common schools received a gold medal, the second highest award; the Salt Lake High school received a silver medal, standing third; the University of Utah training school received a gold medal; the State Normal school a silver medal; the Utah county public schools a bronze medal; the Indian Industrial school a bronze medal. The grand prize, the highest award given in the United States, went to the admirable school for the Deaf, Dumb and Blind at Ogden.

Sectarian Schools.—The Mormon church has endowed three universities and several academies. The Latter-day Saints' University, which includes normal, academic and business departments, occupies three buildings opposite the Temple in Salt Lake City. The Brigham Young universities at Logan and at Provo are similar institutions and attract a large attendance from the agricultural sections of the State. The Provo B. Y. university has a branch normal at Beaver. The Catholics have a complete system of religious and secular instruction in the principal cities of Utah. The Protestant schools are Rowland Hall (Episcopal), Gordon Academy (Congressional), Collegiate Institute (Presbyterian), all in Salt Lake City.

Hospitals.—The principal hospitals in Salt Lake are the Judge Miners' Home, Groves' Latter-day Saints' hospital, St. Marks, an Episcopal hospital, and the Holy Cross hospital, a Catholic institution. Ogden has a large Catholic hospital and at Park City is a well equipped hospital established by the Western Federation of Miners. There are two homes for orphans in Salt Lake and a number of charitable and home-finding associations.



ST. MARY'S CATHEDRAL, CATHOLIC.
MORMON TEMPLE.
FIRST PRESBYTERIAN CHURCH.

Churches, Libraries and Clubs.

CHURCHES.—Few villages in Utah are without places of worship for those of the orthodox creeds and the larger cities are as well provided with large and beautiful churches as places of similar population in the Eastern states. In addition to the Latter-day Saints' Tabernacle and meeting houses, Salt Lake has churches of the following denominations: Baptist, Catholic, Christian, Congregational, Episcopal, Hebrew, Josephite, Lutheran, Methodist, Presbyterian, Scientist, Unitarian. Some of these denominations have as many as three buildings. The Catholic Cathedral and the First Presbyterian church would be ornaments to any city. The Methodists are preparing plans for a \$70,000 church edifice.

Libraries.—Salt Lake City owns a large free public library which will soon be installed in an elegant building erected by a public-spirited citizen, John Q. Packard. Ogden has a Carnegie library. Other cities have the nucleus of excellent free libraries.

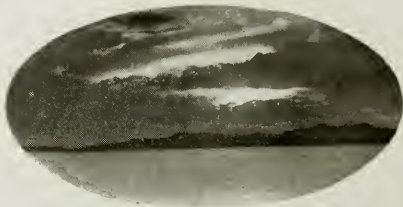
Y. M. C. A.—The Young Men's Christian Association was established in Salt Lake in 1890, and is a thriving organization. It has just completed an imposing edifice at a cost of \$93,000, raised by private subscription. The building is of gray stone and red pressed brick, is three stories high, 129 1-2 feet long and 91 feet wide. It contains an auditorium with a seating capacity of 500, three separate bath and locker rooms, a magnificent swimming pool and a large and airy gymnasium, together



THE ALTA CLUB, SALT LAKE.
PACKARD PUBLIC LIBRARY.
THE UNIVERSITY CLUB.

with other rooms and equipment for the benefit of boys and young men. A night school will be conducted in connection with the institution at which mechanical drawing, bookkeeping and other useful knowledge will be imparted free of cost.

Clubs.—Among the numerous clubs of Utah the following are pre-eminent: The Alta club, the oldest social club in Salt Lake, owns a magnificent gray stone club house. The Commercial club, an organization of Salt Lake City's representative business men, has fine apartments and a high class cuisine. The Country club is provided with a fine club house, golf links, tennis courts and drives. The University club, Salt Lake, is now occupying its new home, one of the handsomest club buildings to be found in the West. The Weber club of Ogden is a strong social and business organization. The Commercial clubs of Provo and of Logan are organized along the same lines as the Commercial club of Salt Lake. The women of Salt Lake have a beautiful little club house and a very meritorious organization. Each of the other cities of the State has one or more flourishing woman's clubs.



SUNSET ON GREAT SALT LAKE.

