

Pioche Develops Millions of Tons of Silver Lead Ores

SOME big things happened in the Ely mining district at Pioche, Nevada, during the year 1909, and many things are now in the course of formation, which will during the coming year make this famous old camp one of the most talked of producers in the United States. Throughout the year the greatest development work was on the Prince Consolidated side of the camp where several hundred men were employed, a number of rich strikes made, many thousands of dollars spent in machinery and development, and practically a new side of the camp shown to the world. Besides that surveys were made from Pioche, around the point of a new railroad to the Prince side for a new railroad and money for it practically assured, the difficulties of the Nevada-Utah Mines and Smelters corporation and the Ohio-Kentucky Mining company over their joint holdings were definitely settled, the opening up of a number of new properties in the Highland, Jack Rabbit and Bristol districts, the adding of a new shipper to the list—the Prince Consolidated, and the selection of a site for a smelter in the district.

The promises that make the camp look brighter than ever for the year 1910 are the positive assurance that early spring will see a railroad on its way around the mountain to the Prince side of the camp, the shipping of more than 500 tons of ore a day from this mine, steady shipping from the Nevada-Utah and Ohio-Kentucky mines, now known as the Consolidated Pioche Mines company, the resumption of work by the Nevada-Utah at its Day mine in the Jack Rabbit district, the continuing of work by the Scott Mines company, and the active development of at least a score of other properties in the district. The next year will see at least 1,000 tons of ore a day coming out of the camp and more real work than the camp has ever shown.

MUCH IN SIGHT.

Pioche with its millions in dividends to its credit will start with a firmer foundation than ever before. Some of the best known mining men in the United States have become interested in the camp and it is certain that another year will find Pioche the most talked of camp in the country. Blocked out in the mines at Pioche and vicinity at present are at least 5,000,000 tons of ore that will not net the companies more than \$2 a ton. Much of this high grade that will run into tens of dollars.

A world of work has been done on the west side of Pioche and rapid advancement was made by the Prince Consolidated property, owned by the Godde brothers of Salt Lake City and James L. Hackett of Kentucky. A recent report by one engineer disclosed that there is now sufficient ore blocked out in the mine, to net the company \$5,500,000.

One of the things accomplished by the company this year was sinking the quartzite and supposed water level. This was found at a depth of 600 feet and the fissures were found to continue on into the quartzite.

The great body of ore in this mine is becoming more extensive than was at first expected. What was believed to have been the limit of the ore at the north has turned out to be a small line streak, and the ore was picked up on the other side as rich and extensive as ever. The work is now being directed toward drifting to the south with cross cuts each 100 feet. The cross cuts are run to the foot wall and the hanging wall. On every level there is ore and the drifts are all being extended to block out the ore. All the bedded veins are being explored and they are being cut out in blocks of 100 feet by 200 feet. The thickness of these veins varies from 5 to 30 feet.

NEW SHIPPING ORES.

The company is now shipping 50 tons of ore a day to the Salt Lake valley smelters. The ore is hauled to Panaca, nine miles, by the Nevada-Utah mine. During the year extensive development work has been carried on at the Mendha mine, which has also done considerable shipping.

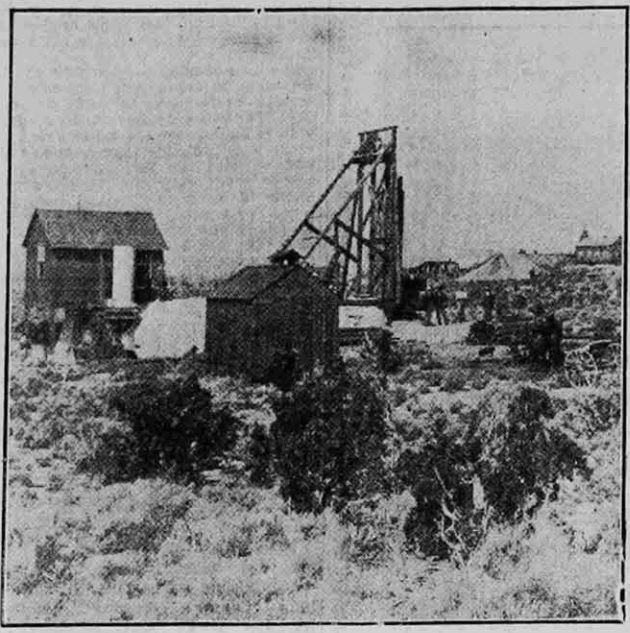
One of the new companies to be organized and start an extensive campaign of development was the Centennial Pioche, which was brought into existence by the efforts of M. C. Godde. This promising company owns 11 patented claims adjoining the Prince Consolidated on the south side. The company is capitalized for \$500,000 with shares at \$50 cents per share. Charles P. Brooks is president; Frank W. Klett, vice president; M. C. Godde, secretary and treasurer. The officers with C. S. Cowan and C. Mantor compose the directorate. William Lloyd is the mine superintendent.

Engineers and geologists look upon the property as one of the most promising in the district. From surface appearances and under ground workings there is every indication that the source of the ore from the great Prince mine was in Centennial Pioche ground. The pitch of the veins in the Prince are all toward the Centennial. The Centennial is intersected by a number of dikes and also a porphyry dike that is believed to have been the seat of the enrichment.

The property is well equipped and the shaft is now down 340 feet. It is the intention to cross the mountain at foot level, but there is every reason to believe that ore will be found in the shaft.

ANOTHER MAKES STRIKE.

Through the efforts of A. M. Low, general counsel for the Rock Island railroad and George E. Cox of Pioche,



SHAFT AT CENTENNIAL PIOCHE WITH PRINCE MINE IN BACKGROUND.

The Pioche Golden Prince and the Gold and Silver Prince properties have been brought to the front this year. On the 500 foot level of the Golden Prince property the drift was pushed through a streak of porphyry and a bedded vein of ore was found to make on the other side. The drift went through this fine ore body for 125 feet and the mine is now on the road to become one of the big properties on that side of the camp. The Gold and Silver Prince has done considerable work during the year. Both properties are excellently equipped.

The Pioche King, controlled by John A. Kirby and associates is one of the new properties of the district. It has rapidly forged to the front during the year. It adjoins the Prince on the north. The company is now crosscutting for the dike at the east on the 200 foot level. Some excellent ore has been found in this property but no large quantity.

AT PIOCHE METAL.

Among the companies that have come into prominence in the Pioche district during the year is the Pioche Metals mining company, which acquired what is known as the Point property. It was incorporated on two claims but it has since acquired 75 per cent of the stock of its neighbor, the Pioche Nevada Consolidated Mining company, which is the owner of 13 claims. Although the property was one of those picked out in the early days as indicative of containing good ore and from which several carloads were shipped, it was not until the present company acquired the title that progressive work was undertaken.

For years it has been believed that ore did not exist in the line hill at the old Pioche property near Pioche. D. D. Houtz of Provo and Alex. Colbath of Salt Lake City believed otherwise and during the year opened up the mine as the Black Vault Mining company, and, as the company has now gone as far as it can by hand work, class equipment is now being installed. Some of the highest silver values found in the camp are coming from this property. It is declared that there is no doubt but what the property contains the rich vein of the famous old Meadow Valley mine.

CONSOLIDATED MINES.

Since plans were agreed upon for the consolidation of the properties of the Ohio-Kentucky and Nevada-Utah properties close to Pioche, operations have been started on the No. 1 shaft of the new company. As many men can be used are now cutting stations and preparing to run crosscuts to connect with the old Raymond & Ely and the Greenwood. As there are thousands of tons of ore blocked out in these properties steady shipping will be started shortly after the first of the year. This consolidation was one of the big events in Pioche during the year. It will be a great stimulus to renewed activities.

As soon as this property is well under way it is probable that a smelter will be erected to care for the ores of the Day mine, the Prince and the Consolidated Pioche.

Recently J. A. Wesco, John Cook, H. W. Rand, Ernest Hodges and others took over the Gold Chief property better known as the Day mine. This has been found to be the richest gold property in the vicinity. The owners are now building a 100-ton mill, putting in a hoist, buildings, tanks and other equipment for a cyaniding plant. It has been demonstrated that the ore runs from \$8 to \$12 a ton in gold and that the

extraction is as high as 97 per cent on every coarse crushing.

FIND MUCH ORE.

A large amount of ore was blocked out in the mine many years ago but it was never extracted. Since it was taken over an odd condition has been found. It was believed that the incline shaft was sent down in an eight foot vein of ore. In excavating for the hoist above the old shaft the same class of ore was found. Sinking below the foot wall has also demonstrated that the ore is found there and equally rich. It is now believed that the two walls are not the limits of the vein, but the walls of veins striking in opposite directions.

THE MENDHA-NEVADA.

Another old producer of the Pioche country which is fast shaping itself for a big era of production, and during the year has made some great strides in development work, is the Mendha-Nevada mine. During the year the possibilities of the property became more apparent and it has been during that period and is now a steady shipper.

The Mendha-Nevada Mining company was incorporated under the laws of Utah in 1907 for the operation and development of the old Mendha mine, and adjoining property, in the Highland mining district, Lincoln county, Nevada, seven miles from the great camp of Pioche. The company is the owner of 10 claims in this highly mineralized district, together with two millsites each with a splendid water right. There also cover the great Mendha fissure and several parallel veins, for a mile and a quarter along the strike, and from nearly every place along the surface ore can be taken.

In formation the Highland district much resembles the old limestone camps. The district is composed of a limestone. The chemical action has carved out the lime and deposited in its place immense bodies of ore of the commercial grade. The great proportions to which these bodies attain resemble to a great degree the ore shoots of the Tintic district in Utah Lake mining country. The history of the Mendha mine has a history. Its discovery was closely associated with the rise of the Highland district. It has been done on ore along the strike and dip of the vertical fissure and following the ore deposits in the bedded planes, and at no time has the mine been without ore. It has since been demonstrated that the richest ore bodies lay along the bedded planes. The Mendha vein is a true fissure in the limestone and has a strike east and west and a dip of 70 degrees to the north. There are also north and south fissures which dip to the west with the bedded planes in a formation at an angle of about 30 degrees. The main source of production formerly came from the vertical fissure, and following down one of the bedded fissures, while the largest ore bodies have been found at their intersection. At the Mendha all work has been done on the vertical fissure.

FAMOUS PRODUCER.

The property is a famous old-time producer and throughout it has always responded generously to intelligent development. Conditions have resulted in many changes of ownership and each time it has grown.

As far back as 1876 this property attracted attention as a fissure ore for the smelter at Shantle, Beaver county, Utah for the silver-lead furnace at Bristol, 25 miles north of Pioche, and in the reduction of ores from the old Hillside mines in the Bristol district.

In 1881, with other properties of the Highland and Bristol district, the Mendha was acquired by the Day Mining company of the Jack Rabbit district, 18 miles north of Pioche, and its ore was used in connection with the fluxing of the iron ores from the Day mine, in the Bristol furnace.

Some ten years later the property passed into the hands of the Pioche Consolidated Mining & Smelting company and again the ore from this producer were called upon to aid in the fluxing of the Consolidated's ores at its Pioche plant. During the period changes it is believed that the production from this mine aggregated \$500,000 and only a start was made on its great resources. The work this year has far increased the possibilities of this mine it has now passed the stage of promising to be a great mine, but is one.

The present property is worked by an incline shaft, pitching at an angle of about 30 degrees and following the plane of one of the bedded fissures for a distance of 800 feet. Almost the entire distance from the surface to the bottom of the shaft the ore shoots have been continuous. The ore bodies have averaged five to six feet and in places have widened out to 10 or 12 feet. The best showing ever made in the mine was in the deepest workings, where the ore in the main fissure, on the bedded plane, was mined for a width of 20 feet, horizontally, sunk upon for a depth of 75 feet and raised upon for 10 or 12 feet. This wonderful ore shoot is one of the signs of the great value of the property.

WORK BEDDED PLANE.

The bedded vein has been worked for a distance of 400 feet southwest from the bottom of the main shaft during the past year, following the same ore shoot which cropped on the surface.

In quality and value the ore opened up has been characteristic of the property and during the year regular shipments have been made to the Salt Lake valley smelters. No ore has been stoped and the ore shipped has been what was taken out in development work. The source of the great ore bodies in the Mendha are now believed to come from an immense porphyry dike, lying to the south.

The ores are a composition of iron, lime and silica, carrying values in silver, lead and gold. The average value of the ore is shown by smaller shipments ranges from 25 to 30 per cent lead, 30 ounces in silver and \$5 to \$16 in gold. In the bedded veins an increase in the gold values is shown, which ranges from \$15 to \$20 a ton. In lead and silver the ore from the vertical and bedded veins run about the same. Where galena is present the silver value is high, this character of ore being much richer than the usual run of carbonates. Sensational values are frequent in this mine and tonnages are large. This is also true of the properties adjoining on the east and west.

OLD HAMBURG MINE.

In the Hamburg mine, which is one of the holdings of the Mendha, development has been accomplished by means of a 500-foot tunnel run in on the vein, and which connects with the bottom of a 125-foot shaft, which was sunk in ore. Practically no stoping was done in this mine, yet it produced \$75,000 to \$100,000. The ore and formation of this mine are practically the same as the Mendha.

All the mine workings at the Mendha are in ore, there will be no need of work necessary for regular and heavy extraction. The property is well equipped for extensive work. A 40-horsepower gasoline engine, a furnace, power for the hoist and the air compressor. The ore and waste from the mine is taken out by means of a skip which works automatically. It dumps into a splendid water right. Everything at the property is arranged for convenience and economy. The large boarding house, the cozy bunk house, dwellings, office, building, blacksmith shop and stables all speak of the mastery manner in which the property is handled.

The capitalization of this company is \$1,000,000, with shares at \$1 each. Thos. J. Osborne of Salt Lake City is the president; John R. Cook, Pioche, vice president and manager; Murray C. Godde, Pioche, secretary and treasurer. The officers with William Lloyd and J. B. Toronto, compose the directorate.

THE CAMP OF MERCUR.

MERCUR, the cradle of the cyanide process and the home of its development, again came into the line light this year with a new dividend payer. It was the Boston Sunshine. This company was able to produce \$13,500 for its shareholders and in the first year nearly paid back the entire investment.

The Boston Sunshine was purchased at a sheriff's sale a little over a year ago. The old mill on the property was remodeled and a cyaniding system similar to the Golden Gate mill of the Consolidated Mercur, with a few improvements, was installed. This meant an outlay of something like \$15,000. Almost from the day the mill started it has been making an excellent saving of 30 per cent on \$5.50 ore and handling in the neighborhood of 125 tons of ore a day. Thus far the mill has worked only the oxidized ores of which there is a large tonnage in the mine.

It is probable that it will also have to roast its sulphide ores but thus far there has been nothing of this kind at the property. At present this is one of the questions that the Consolidated Mercur is endeavoring to solve. It is declared that as soon as some method is devised that does away with the roasting process it will mean new life to Mercur. General Manager George H. Dera of the Consolidated Mercur is confident that this will be one of the problems of the camp that will be solved during the year.

Among the mines at Mercur this year a number of things have happened. L. H. Hunt and associates endeavored to treat the tailings from the old Sacramento mine and after erecting a mill and doing a large amount of work, they were obliged to abandon the project.

Following this the mill was taken over and with a number of changes was put in readiness to treat ores from the West Dip property. The property has been taken over and work started for its revival.

Throughout the year the Holderman mill has been retreating the tailings of the old Manning mill by the Holderman process of cyaniding.

Although the Consolidated Mercur was not placed on the dividend list from the district it has been better than holding its own. With the improvements that are now being made in the treatment of the ores it is probable that there will be greater activity there during the coming year and that Mercur will again be one of the most active camps of the state. For a number of years it has been the heaviest gold producing camp of the state.

ALTA AND OTHERS.

FROM the rugged hills of Alta considerable ore was shipped during the year, and the Columbus Consolidated sent from 30 to 50 tons of ore a day to the market. This property was the most active in the district. During the year two new ore bodies were opened up. From one of them most of the shipping was done while the latest strike at the mine has not been worked enough to tell of its dimensions. The ore is being stoped out as the work advances and is not blocked out.

At the other body was found in the fall of 1908. It probably continues to the surface, a distance of 800 feet. Thus far only a small amount of the ore has been extracted.

The company has 150 men employed at the mine and the mill, and the mill has been operating two shifts throughout the year. One of the improvements this year was the installation of a 600 gallon centrifugal, four-stage, electric pump. There are five other pumps at the property which are used 600 gallons of water a minute so that there are sufficient pumps to care for any flow that may be encountered.

During the year the company has done an enormous amount of development.

At the South Columbus a force of about 20 men has been employed this year. Although work is going ahead there have been no big developments.

Other properties in the Alta, Big Cottonwood, and American Fork districts have been busy. Mineral Flat and Pittsburg Consolidated in American Fork have been worked a great part of the year. In the same district were other active companies, such as the Pacific, Dutchman, Mary Ellen, Mountain Dell, and a dozen others. In the Big Cottonwood district were the Maxwell, Cardiff, Rexall, Flagstaff, Rainbow and many more, that were active.

Another active property in the Alta district was the Alta Hecla. A real active company in that vicinity was the Utah Mines Coalition, which came into existence early in the year, backed by such men as J. B. Riosque, Duncan MacViche, James A. Pollock and others.

THE PARK VALLEY DISTRICT.

Although little has been heard of the Park Valley district during the past year, this part of the mining country has been extensively developed and is fast developing into one of the gold districts of the state. The Century Mining and Milling company was at one time one of the dividend payers of the state and before another year rolls around it will be back in the ranks again. While this company has been endeavoring to solve the most vexing questions and developing ore for use in its mill, the Susannah Gold Mining company has been putting a new mill into shape in the district.

The Susannah Mining company has one of the best equipped small plants in the state. Its compactness is one of its main features. This was one of the new mills erected in the state this year. Already this plant has begun shipping gold bullion to the local United States assay office.

Several other properties in the district have been pushing development work throughout the year. The Deer Trail, the Amazon group the Utah Desert and others have been keeping things lively in the district.

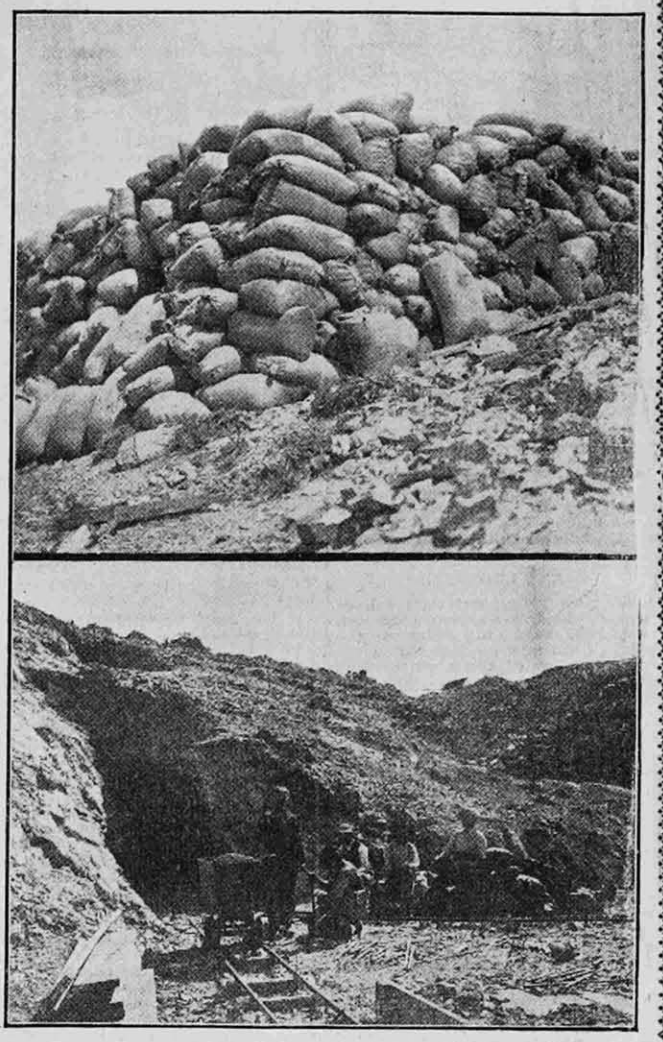
WHY THE MENU WAS CHANGED.

The culinary department of an East Indian household, if the story of an American traveler who has recently returned from Calcutta is to be believed, was managed far different from an American kitchen. "Here we employ an Ethiopian expert at so much a week," says the Philadelphia Record. "There a chef would disdain to place a weekly valuation on his services. His conditions involve a flat rate of so many shillings weekly for the furnishing and preparation of provisions. This system of putting the culinary department out to contract causes a penuriousness on the part of the chef which frequently is not for the best health and welfare of the household. Shortly before last Christmas the above named American tourist had ordered his cook to have steak for dinner. Broiled chicken was served instead. Pressed for his reasons for disregarding the command of the head of the household, the cook explained that the chicken had taken sick and if it had not been killed and served that day he was afraid he would have lost it."

Black Horse Develops Much Gold

FOR several years work has been going ahead steadily in the Black Horse mining district, in the Snake range of mountains, one of the most highly mineralized sections of White Pine county, Nevada. A number of large gold properties are now being opened up as well as many other metal producers. Little has been heard of this heavily endowed mineral district and one of the prime movers toward bringing this

work blocking out ore and there is now enough ore in sight to keep a mill going for several years. A promising group of claims is that of the Nil Desperandum Mining company, which is comprised of about 400 acres. This is also a gold bearing property. No real systematic exploration work has thus far been done. One shaft on the property is down 242 feet and another is 80 feet deep, while there are a number of shallow openings. The entire property is along the Black Horse ledge. The large shaft was put down in a



HIGH GRADE ON DUMP AND TUNNEL AT SAN PEDRO MINE.

portion of Nevada to the front is A. G. Burritt, president and manager of the Ohana Mining company, which has offices at 508 Templeton building.

For 16 years Mr. Burritt has toiled in the district and at last has brought together some of the most promising properties. Among these may be considered the Ohana Mining company at Sacramento Pass, which is the owner of 20 claims and a 160 acre ranch, containing a large spring capable of supplying a good sized mill. The property was purchased from Mose L. Woodman, one of the pioneers of the district.

Three distinct high grade gold ore veins traverse the property, while a fourth apparently crosscuts them. Ore has been found that ran as high as \$2,000 a ton, while the average is believed to be milling ore running from \$35 to \$45. From a shallow shaft Woodman hauled 500 tons of ore 60 miles and then secured a profit of \$47 a ton.

Early this spring a shaft will be sent down and drifts sent out to crosscut the four veins. The property is to also be equipped with up-to-date machinery. Eugene T. Woolley is vice-president of the company. L. L. Simmons, secretary and treasurer and Theodore Tobolsan and Charles McCarty compose the board of directors.

OLD SAN PEDRO MINE.

One of the proven mines of the district is the old San Pedro mine which is owned by the Amalgamated Nevada Mines company, a concern in which mostly eastern people are interested, mainly New England capitalists. This property consists of 12 claims. It has been extensively developed and many thousands of tons of high grade gold ore are now in sight. Besides this there are many dumps of good milling ore and several hundred tons of high grade ore running about \$150 a ton is in sacks near the tunnel. From the mouth of the tunnel a car load of ore was shipped which brought \$91 a ton.

On account of litigation the property has been idle a great deal of the time. This is being changed and in the spring it is planned to erect a mill at the property and start production. The eastern stock holders have clung to the property in spite of adverse conditions and they now intend to make it a mine. Several men are now at

wash, but it is believed that better results could be obtained farther up the hill. For that reason work has been moved to the upper part of the ground.

PLACER GULCH.

The ledge at the upper end of the ground crosses the upper edge of Placer gulch where considerable placer gold was taken in the early days and within a few feet of the ledge.

Manager Burritt asserts that work will be pushed on this property in the spring. The property has only been held a short time so that real exploration and development work have not been started. The company intends to sink and drift to reach the contact, which on the outcrop shows some splendid gold values.

The Lexington Concord Mining company property of which Mr. Burritt is general manager and a director, is 35 miles south of Black Horse, in Lexington canyon, in the Snake range and consists of eight claims. Ferdinand Fabian of Salt Lake City is the president.

On the south side of the canyon the ledge is exposed for 2,000 feet and has some excellent showings in gold silver and some copper. This ore will probably average \$37 a ton.

On the opposite side of the canyon, which is also Lexington ground, there are two deposits of the ore in the lime. From this some very high grade assays have been made running as high as 900 ounces in silver. The mineral throughout will average \$40 to \$45 a ton. It is an excellent concentrating product.

Sufficient development has not been done to determine the source of the ore. Plans are now being made for more extensive work and the building of a mill in the spring.

The Black Horse district is fast developing into one of the strong gold camps of Nevada. It is now coming to its own and within the next year some of the greatest developments of White Pine county will be made there. It is through the Deep Creek district in Utah, and on to Salt Lake City will put this section of the country in close touch with the markets.

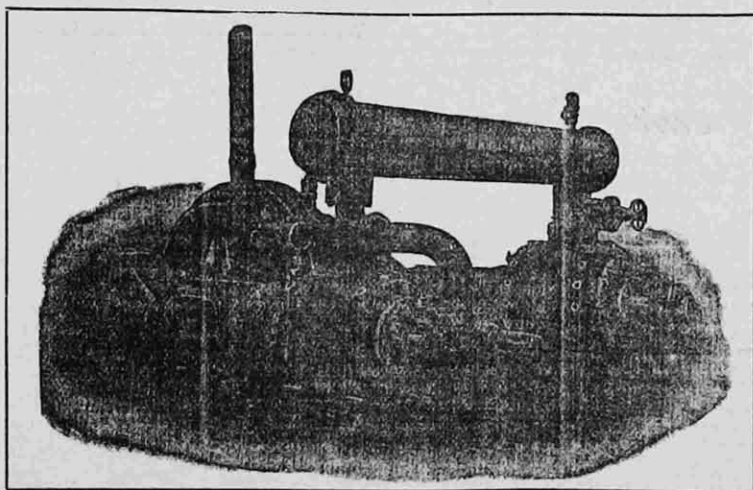
YOUR OWN WAY.

"It takes a heap o' determination," said Uncle Eben, "to hav yuh own way in dis life an' a heap 'brains to know what to do wit it after yuh gits it."—Washington Star.

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