DESERET EVENING NEWS.

TRUTH AND LIBERTY.

PART TWO—17 TO 32. SATURDAY, DECEMBER 17, 1904. SALT LAKE CITY, UTAH. FIFTY-FOURTH YEAR.

Salt Lake One of the World's First Smelting Centers.

Utah's Copper Production Will Approximate Fifty Million Pounds This Year.

WITHOUT the smelters the mining industry would be in as bad a fix as a wagon minus all its wheels; or as helpless as a railroad train without an engine to pull it. The mines of this state, with very few exceptions—the purely gold producers, could not operate if it were not for the reduction plants that have been provided at a cost running into the millions of dollars. The two are synonomous; one could not very well do without the other, and a good many other industries could not prosper quite so well were it not for those directly applied to mining.

During the past few years remarkable progress has been made in the building up of the smelting enterprise in Utah. Activity in this regard has been directed principally to the Salt Lake valley, where all the custom plants are located.

ARTERIES OF WEALTH.

A few companies, operating in remote sections of the state, have provided plants for their own properties. But practically all the wealth produced in this mountain commonwealth, comes through the arteries of the smelters at Murray and Bingham Junction.

Considerably more than $20,000,000 passed through these avenues last year, and nearer $30,000,000 will have come into circulation in the same way when the curtain rolls down and the year 1904 has passed into history.

A BEEHIVE OF ACTIVITY.

So active has the smelting industry become in the Salt Lake valley that the farmers, who settled in this fertile spot, have raised an alarm for fear their places will be devastated of vegetation unless some means are provided for the control of the increasing volume of smoke emitted from the stacks at the several plants. This matter was brought to the attention of the smelting companies by the land owners not long ago; and while the problem is not one altogether easy of solution, the former hope to find a remedy for the condition before the crops of next year begin their plant life. Some of the country's most noted chemists have been employed to conduct a series of investigations of the trouble, and these talented gentlemen have been procured only at great expense to the corporations most directly interested.

GREATEST SMELTING CENTER.

Salt Lake is rapidly becoming the greatest smelting center in the world, and substantial progress was made in that direction this year. All of the plants located here have spent large sums of money in providing additional equipment to increase treatment capacity.

FOUR THOUSAND TONS DAILY.

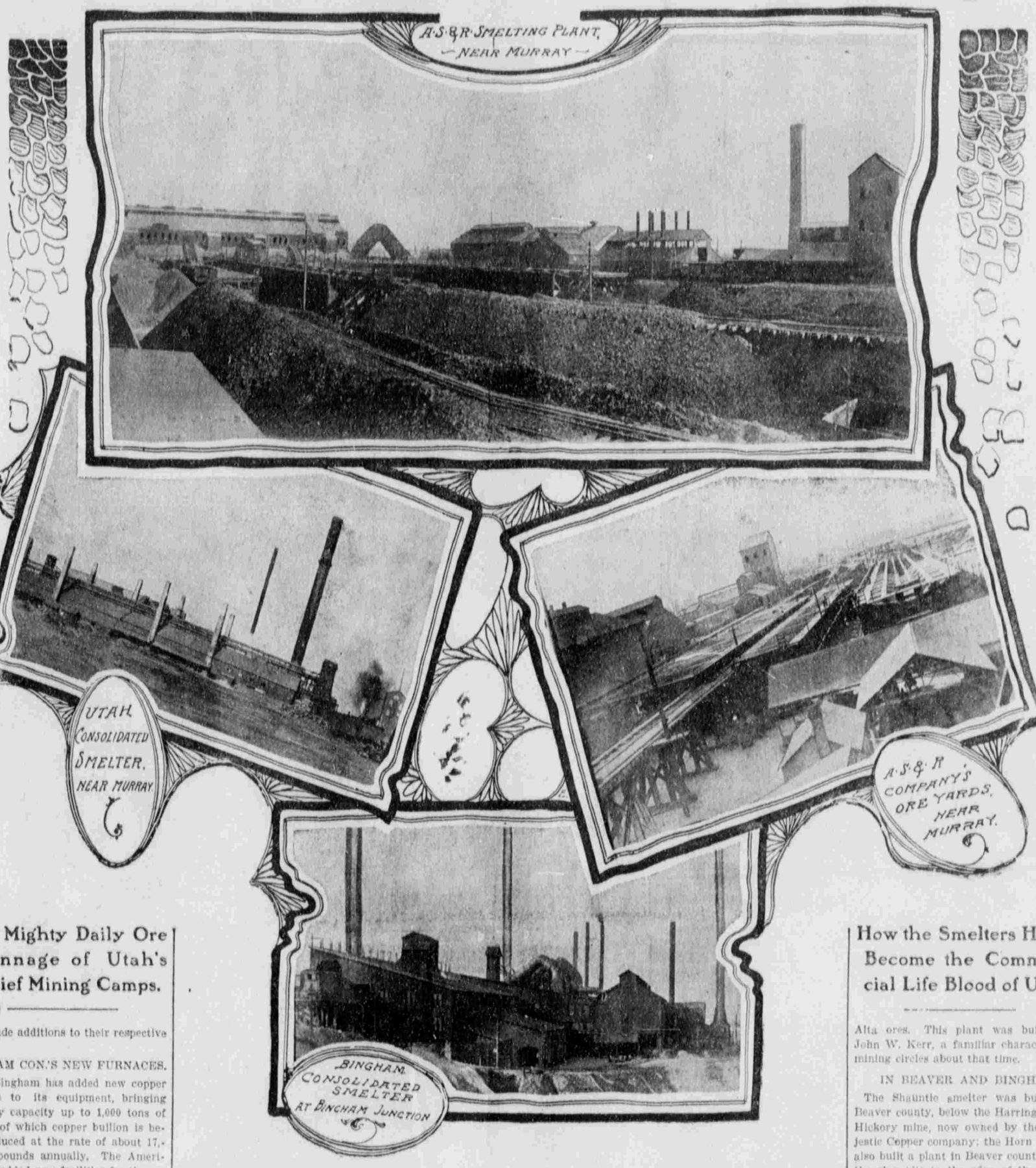
The four great plants south of the city are now handling approximately 4,000 tons of ore daily, and plans are being considered to greatly increase this amount.

NEW LEAD PLANT.

Up to a very recent date, the American Smelting & Refining company, which owns the great works at Murray, was the only buyer of lead ores. The other plants—the Utah Consolidated, Bingham Consolidated and United States, being equipped with furnaces intended only for the treatment of copper ores. During this year, however, the United States company broadened its sphere of usefulness by the construction of a new lead smelter at a cost approximating a little over a half million dollars, and for the class of ores mentioned, is in the market in competition with the American. The plant has not yet been blown in; in fact, it is not quite completed, but will be early in the new year. Enlargements have also been made to the company's copper smelter, which is turning out copper bullion at the rate of about 18,000,000 pounds annually. The lead smelter has capacity for the treatment of about 400 tons of ore daily.

AN INTERCHANGE OF ORES.

A year ago the American Smelting & Refining company had in contemplation for this year, the construction of a copper smelting plant to cost upyards of $750,000. The project would have been carried through, perhaps, had it not been for an arrangement for an interchange of ores with the Bingham Consolidated. The latter, having a large reserve of lead ores in its own mines, had about concluded to install a lead stack. But under the arrangement entered into with the American, the latter is to receive all the lead ores the Bingham Con. mines itself or obtains in the markets. On the other hand, the American switches all the copper ores it purchases over to the Bingham plant, at Bingham Junction, where it undergoes treatment. By this arrangement, a great deal has been saved to both these concerns in trying to keep pace with the rapid development of the mines in this and other states—for nearly all the ore produced in Nevada comes here for reduction, as well as a good portion of the tonnages yielded by the camps of Wyoming, Idaho and Colorado. As it is, the American has not been compelled to build a complete copper plant and the Bingham Con. has found no necessity for a lead smelter; neither have had to worry about where its fluxes are to come from if the supply runs short. Both companies, however,



The Mighty Daily Ore Tonnage of Utah's Chief Mining Camps.

Where Ores From Utah and Other States Are Reduced.

How the Smelters Have Become the Commercial Life Blood of Utah

The Smoke Problem and How Smelter Owners are Energetically Engaged in its Solution.

have made additions to their respective plants.

BINGHAM CON.'S NEW FURNACES.

The Bingham has added new copper furnaces to its equipment, bringing the daily capacity up to 1,000 tons of ore out of which copper bullion is being produced at the rate of about 17,000,000 pounds annually. The American has added new facilities for the reduction of ores other than copper, increasing its capacity, accordingly. It does turn out some copper bullion, however, at present about 5,000,000 pounds annually.

UTAH CON. ENLARGEMENT.

The Utah Consolidated, whose Bingham mines have continued to perform wonders, by increasing their ore reserves, found it expedient to increase its output; and, at an expense of about $300,000, made such enlargements as has enabled the company to treat one-half as much ore in a day as was possible a year ago, and is making copper at the rate of about 22,000,000 pounds annually.

TONOPAH AND GOLDFIELD ORES.

The discovery of Tonopah and Goldfield, in Nevada, and the general prosperity which has come over other sections of the mining west during the past year or so, through the smelting companies operating in the Salt Lake Valley, has been the means of bringing many hundreds of thousands of dollars through Salt Lake channels. Two years ago, San Francisco had the decided advantage in freight rates, but through the influences of local operators, Salt Lake has been given an even chance with the result, that the business from that section, or the greater portion of it, has been turned this way. Through these influences, Salt Lake business houses have enjoyed trade from this quarter, but not what they could have had, had they been as alert as the smelter managers in going after new business.

BINGHAMM CON. EQUIPMENT.

The Bingham Consolidated is operating with five copper furnaces, the fifth one having been installed only during the past few weeks. The converter department contains two converters of extra large size and an unusually large traveling crane. By smelting men, this department is pronounced as being the most complete, as compared to other plants, in the west.

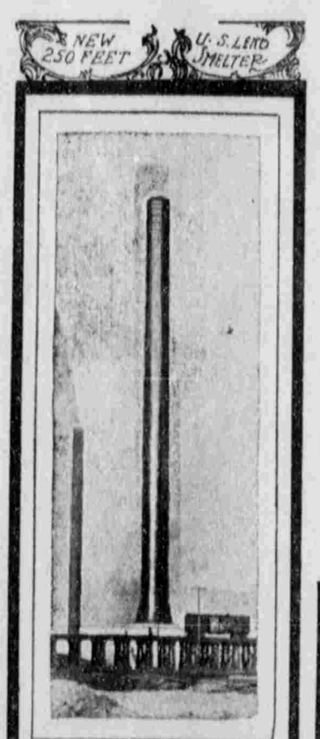
A feature in the construction of the Bingham Con. smelter, worthy of note, is the big balloon flue, which collects practically all the valuable flue dust, which is collected daily and brought down to the bricquetting press; after passing through this machinery, it is in shape for re-smelting. The flue mentioned, is about 200 yards in length.

The equipment of the smelter has been made as automatic as possible and is otherwise a very modern plant.

Mr. W. H. Nutting serves the company as its smelter superintendent, having been associated with it almost from its inception.

IN REMINISCENCE.

The credit of having operated the first smelter in Utah has been given, by



various pioneers, to the Woodhull Brothers, who operated a plant in the early 70's at Gordon's near the mouth of Big Cottonwood canyon. Their plant was a crude affair, but it served the purpose and probably did as well as any other smelter could in those days when the science of metallurgy was not as well understood as it is now. As far as being a money making proposition, the smelting business then did not pan out very well and most of the early day plants built about the time the Woodhull's operated theirs, were usually short lived.

MILLER MOUNTAIN PLANT.

A furnace built for the Miller Mountain mine in American Fork canyon, is said to have made money for its owners until the ore pinched, when it was forced to close. F. A. Pascoe, built and operated a small plant near the Warm Springs in this city, with considerable success. Later he found Stockton a prolific field. Buel & Bateman built a smelter about 5 miles east of Sandy for the treatment of ore from Alta and about 1876 it was leased to Maher & Geist, who increased the capacity to 200 tons. The Saturn was another of the early smelters built for Alta ores. This plant was built by John W. Kerr, a familiar character in mining circles about that time.

IN BEAVER AND BINGHAM.

The Shaguntic smelter was built in Beaver county, below the Harrington & Hickory mine, now owned by the Majestic Copper company; the Horn Silver also built a plant in Beaver county and the slag pile in the edge of the town of Frisco is still in evidence.

Bingham canyon obtained its first smelter in 1873, when the owners of the Winnemuck mine provided facilities for reducing the ores mined from that property.

That year the Mingo, which was operated at Sandy until less than four years ago, was placed in commission.

ADVENT OF THE GERMANIA.

After the Mingo, came the Germania at Murray, which was established by Christopher Billings. This was the most complete plant built up to this time. During the latter years of its service, T. R. Jopes, now at the head of the purchasing department of the United States Mining company, served the Germania as its manager. Both the Mingo and Germania plants were absorbed by the American Smelting & Refining company about five years ago. Soon after these deals were made, C. W. Whitley who had been manager of the East Helena smelter, came to this city to serve the American in the same capacity. He still officiates, while Joseph M. Bidwell is assistant manager and R. D. Rhoades, recognized as being one of the most thorough smelting men in the west, is superintendent and is in active charge of the operating department. The old Hanauer smelter, the ruins of which still mark its location near Murray, was operated from 1870 up to about six years ago, when it was blown out for good, the property being purchased by the American.

Other early day smelters are worthy of some mention. They were the Sheridan, built at West Jordan in 1873, by New York parties with whom was associated Jacob E. and Simon Bamberger. The plant treated from 150 to 200 tons per day and after being in commission for a number of years was sold and abandoned. During the following year, 1874, as an outgrowth of the Jordan mine, Carson & Buzzo built the Jordan smelter. Later, the plant was operated by L. H. Holden, father of A. F. Holden, the present managing director of the United States Mining company. The property subsequently passed to a French company and is now a part of the United States company's domains at Bingham.

Several other plants were operated; among them one at Leamington, Millard county, but it proved to be a failure.

SMELTING OF COPPER ORES.

Attention was first paid to copper smelting about 1890, when Salt Lake citizens subscribed to a fund raised as a bonus for the building of the copper plant northwest of the city, which was never operated. It was equipped with expensive machinery; but the company became so heavily involved in debt that the courts were called upon to settle matters. The property finally passed into the hands of the Lewisshon brothers of New York. Now that these noted capitalists have become heavily interested in Utah mining affairs, it would not be surprising if some use of the property might be made in the near future.

STARTED WITH HIGHLAND BOY.

The development of the copper industry in Utah really started with the construction of the Highland Boy smelter, now owned by the Utah Consolidated Mining company. The plant was built for the treatment of the ores from the Highland Boy mine of Bingham, by Samuel Newhouse and Thomas Weir. In succession came the Bingham Consolidated, United States, Utah & Eastern, Majestic and Yampa, which, with the exception of the Majestic, are daily adding to the world's supply of copper. The Beaver county plant will soon be doing its part, however. The furnaces will be blown in sometime during the coming year.

SALVATION OF THE PRODUCER.

The introduction of the modern plants for the smelting of ores in the Salt Lake valley has been, in many ways the salvation of the producer. This is particularly true of the copper plants, for until their advent in recent years, the miner of copper ores found it largely impossible to market his product. Likewise, the producer of other classes of ores has been the beneficiary in the reduction of treatment charges and it is now possible to obtain a profit from low grade ore, which not very many years ago, would have resulted in a loss. All this has been changed and yet there are some who complain that the rates are still too high to meet their approbation. While there might be instances of this, there is a disposition on the part of the smelter managers to foster the mining industry by treating the producer fairly and stand ready to make such readjustments in rates as is found expedient.

REDUCTING FREIGHT TARIFFS.

There is no doubt but that the smelting companies have been of valued assistance to the producer in obtaining for their benefit, and, incidentally themselves, reductions in charges for freight tariffs from the transportation lines radiating in all directions from this central point.

It is to their interest to help the miner get a good profit for his ores. This is what makes business for them; the more ore they treat the larger are their profits.

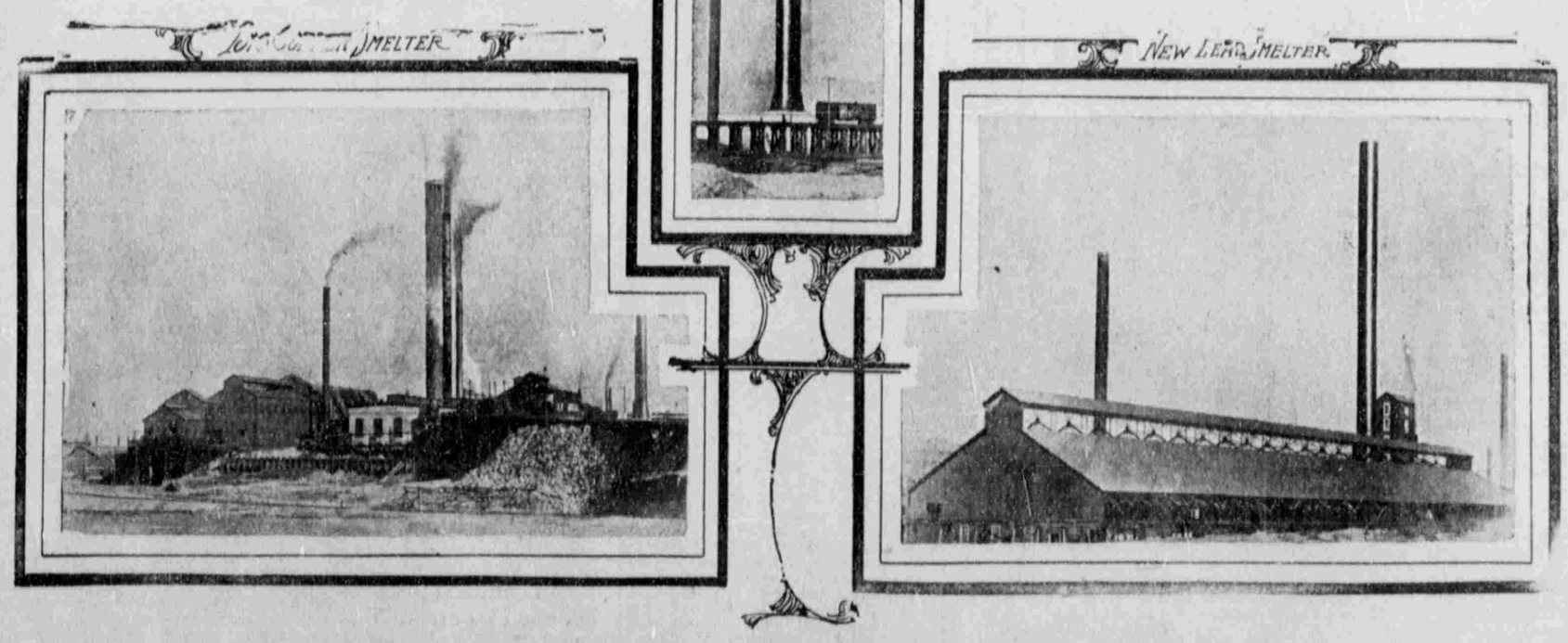
THE MILLS OF UTAH.

Another branch of the industry is the milling of the low grade ores, which, without going through this process, would not be made a commercial product.

In this respect the camps are well supplied and a very large percentage of the ore recived at the smelters is in the form of concentrate.

Park City has its plants, the location being at the Daly-West, Ontario, Silver King, Comstock and California mines. Alta has its Columbus Consolidated and Consolidated Alta plants; Bingham, its Utah Copper, Ohio, New England, Dewey, Butterfield and others of lesser importance. Tintic has good milling facilities; also Stockton, Ophir, and Beaver county, with its great Cactus plant. The above were equipped for the concentration of ores, while in the Mercur, Gold Mountain and Park valley districts are gold mills which do not rely upon the smelters for the final extraction of the values from the ores.

A number of new milling plants are in contemplation for next year. Bingham will probably lead in the improvements of this kind, while Beaver county copper camps and several others will be likewise signally favored in the forward march of prosperity.



UNITED STATES SMELTING COMPANY'S WORKS AT BINGHAM JUNCTION.