PART THREE. DESERET EVENING NEWS. 17 TO 24

TRUTH AND LIBERTY.

FIFTY-THIRD YEAR SATURDAY, FEBRUARY 7, 1903. SALT LAKE CITY, UTAH. NUMBER 67

POCATELLO'S RAILWAY SHOPS

THE BEST IN THE WEST.

More Than Six Hundred Men Now Employed There—Provisions For a Thousand—Where Millions Have Been Spent and Where Millions More Will Be Invested—How Great Enterprises Are Following in the Wake of the Big Establishment—Description of the Shops.

LAST year Idaho in general and Pocatello in particular came in for the lion's share of the appropriation of $2,000,000 made by the Oregon Short Line for general improvements. The year 1902 was marked by the expenditure of a vast amount of money in general track improvements, the putting in of practically new steel bridges across the Snake river at American Falls and near Huntington, and last, but not least, the erection of the most up-to-date shops in the west today. This year will see a big percentage of another $2,000,000 spent in the same state by the same railroad corporation in the further enlargement of the big plant at Pocatello, the installation of steel bridges and additions and improvements in line with the progressive policy of the Harriman management which is represented in Utah, Idaho, Montana and Wyoming in the person of W. H. Bancroft, vice president and general manager of the Oregon Short Line.

A few days ago a representative of the "News" accompanied by C. R. Savage, the official photographer for the system, visited Pocatello and vicinity, and through the courtesy of the officials both in Salt Lake and on the spot, were enabled to secure the excellent views accompanying this article and the data which follows.

ONE THOUSAND BREADWINNERS.

To the casual observer it can be seen at a glance that Pocatello has a great future. At the present time the motive power department of the Oregon Short Line gives employment to no less than 600 breadwinners in the Gate City alone. When the plans of General Manager Bancroft are carried out and the car shops, foundry, new store rooms, sand houses and other buildings are erected and equipped with modern appliances, as they are to be this year at a cost of about $600,000, the number of wage earners will be raised to over 1,000 men, all of whom will patronize the merchants of Pocatello and add to the wealth of that flourishing city in the heart of the Fort Hall Indian reservation.

ANOTHER PROJECT.

With the growth of Pocatello incident to the big railroad plant come other enterprises treading upon its heels. Coincident with the erection of the big plant last year was the building and equipping of the plant of the American Falls Power Light and Water company, which is situated below the big railroad bridge, a picture of which is reproduced above. It is on the cards that this company may yet furnish a portion of the power for the operation of the big shops, as it has plenty of power to spare and obtains the same from the four big 26-inch turbine wheels that spin day and night below the waters of the Snake river driving the big generators of 750 horse power and generating a current of 2,000 volts which by means of three "step-up" transformers the voltage is raised to 33,000 volts. This current is transmitted to Pocatello, 25 miles, distant, where the town is lit, printing presses run and other power furnished. This company has already spent $125,000 and expects to add another $100,000 for equipment and extensions this summer.

A BIG SMOKE STACK.

Had the company finished its work in time, today it is possible that it would be furnishing the power for the big railroad shops. As it is the Short Line concluded to build its own generating plant. The plant is now complete and is in full running order. The big stack of this house is a landmark for miles around Pocatello, standing as it does 175 feet in height. A reproduction of the picture taken of this structure would have been included but unfortunately the negative was broken, so all that can be seen of the stack is the shadow that falls across the foreground of the picture of the exterior of the big shops.

STRIKING MODERN MACHINERY.

To the layman a visit to the Pocatello shops is in every sense of the word a veritable eye-opener. Here one may see a big traveling crane pick up a locomotive and carry it the length of the machine shop, if necessary, with the ease and silent stealth of a youngster carrying off a watermelon from a restricted patch. A steam hammer in the blacksmith shop also will hold his attention. If he is anxious to try the experiment he can place his watch in the maw of this modern Cyclops and the gentleman at the lever will bring down the hammer with such nicety that it will barely crack the crystal on the face. By throwing the lever over, however, a blow, equal to 4,000 pounds can be struck in the twinkling of an eye and the market value of the watch reduced to that of painter's gold leaf.

UP-TO-DATE TOOLS.

Here in the machine shop are to be seen all kinds of lathes that turn solid steel like cutting so much putty; combination punches and shears that plug holes and clip steel and iron like mastodonic "cheese-tasters;" flue welders, bolt threaders, drills, steel plate planers and dozens of other interesting testimonies to the ingenuity of man which make the layman spectator say at stated intervals: "Did you ever see anything like it," or stronger expressions to suit the taste and temperament.

THOSE RESPONSIBLE.

Under one roof are all these wonders gathered, brought together by Mr. Bancroft, and J. F. Duna, superintendent of motive power and machinery for the Short Line, the plans and specifications for the big structure being drawn up under the supervision of Resident Engineer Ashton and his staff. Others, too, have had a hand in the big monument to the evolution of the primal blacksmith's forge to its present state of perfection.

ABSENCE OF BELTING.

If anything the thing that strikes the visitor is the absence of belting and shafting that has been inseparably connected with a big machine shop in the past. These miles of belts—wasters of power and certain death to the careless mechanic who stumbles against them when they are in motion—are all done away with. Each separate piece of machinery is operated by its own motor, fed from the parent generator south of the main shops. Each lathe and machine is under the direct control of the man operating it. Should his arm get caught and he be relentlessly drawn toward death or mutilation, with his free arm he could at once throw off the power and stop the machine; so, also can he stop his tool at that precise moment when another revolution would mean the spoiling of a delicate piece of work.

IMPROVEMENTS TO DATE.

Possibly, however, the story of the big shops is best told in the following data of improvements completed to date, which the "News" has been enabled to secure through the courtesy of the Engineering department:

Main shop, 150 feet by 486 feet; 10-stall extension to enginehouse; powerhouse and stack; transfer table; besides about 25,000 feet of track, and a large amount of filling.

THE MAIN SHOP

is of heavy construction, combination brick and steel on concrete foundation, well lighted from sides and roof; Paradim skylights are used throughout. This shop has gravel roof with a pitch of two inches per foot, and is supported on steel trusses, each truss being supported at the center and end on steel columns running to the ground. The main walls of the building are 17 inches thick, with three partition walls 17 inches thick running from the ground to the roof. Tracks running into the erecting shop are 22-foot centers. Engine pits are 43 feet in length, four feet in width and two and a half feet in depth; built of concrete. All of the main shop has plank floor except the blacksmith and wheel shops, which have Cinder floors.

Wheel and truck shop, 42 feet by 150 feet, located in the east end of the main shop, is provided with one 15-ton crane.

Blacksmith shop, 88 feet by 150 feet, also located in the east end of the main shop, is provided with modern forges and machinery, including one 4,000-pound steam hammer.

Machine shop, 229 feet by 150 feet, located in the central part of the main shop, is provided with one 10-ton crane, and one 100-ton crane, and a gallery supported on steel columns and steel girders, 37 feet wide, the floor line of the same being 21 feet from the floor line of the shop, and extending full length of the shop.

Boiler shop, located in the west end of the main shop, with the riveting tower, is provided with one 37-ton crane, and is so arranged that a hydraulic riveting plant may be installed at some future time. This shop also has one 10-ton crane over machinery.

NEW TOOLS.

Following is the list of tools in the main shop: 76-inch wheel lathe, Niles; 78-inches wheel lathe, Putnam; 54-inch lathe, Putnam; 36-inch boring mill, Niles; No. 3 radial drill, Pond; 28-inch by 16-inch planer, Niles; 36-inch by 10-inch planer, Niles; 12-foot bending rolls, Hilles & Jones; combination punch and shears, Long & Allstaller; double-head axle lathe, Niles; car wheel press, Niles; double-head axle lathe, Niles; 48-inch wheel boring mill, Niles; 3 spindle cylinder boring machine, Niles; 22-inch lathe, Niles; horizontal boring mill, No. 3, Niles; 18-inch Niles' No. 2 turret lathe suspension drill; flue welder, Bertz & Fix; double-head bolt threader; universal radial drill, Niles; 96-inch wheel press, Niles; plate planer, Niles; flange punch, Long & Allstaller; splitting shears, Long & Allstaller; punch, Long & Allstaller; bulldozer No. 6, Williams & White; 80-pound Bradley hammer; car wheel tire lathe, Niles; 24-inch slotter, Niles; 72-inch boring mill, Niles; 42-inch lathe, Pond; 72-inch by 84-inch by 16-foot planer, Niles; wheel mill, Niles; 60-inch radial drill, Niles; 24-inch lathe, Niles; 22-inch Bullard turret lathe, Niles; Yankee twist drill grinder; Acme staybolt threader; 4,000-pound steam hammer, Bement & Niles.

HUGE CRANES.

The large cranes mentioned above were built under the following requirements: One 100-ton crane for machine shop, span 69 feet 9 inches, length of travel 220 feet; height of top of rail above floor line 29 feet; speed of hoist from 10 to 20 feet per minute; speed of trolley from 75 to 100 feet per minute; speed of bridge 150 to 200 feet per minute; number of motors 6. One 30-ton crane for boiler shop, span 69 feet 9 inches; travel 130 feet; distance from floor to top of rail 29 feet; motors 5.

THE MOTORS.

The following motors are used in running the heavy machinery:

Five 20-H. P., 230-volt, 600 revolutions per minute, multipolar; six 15-H. P., 230-volt, 650 revolutions per minute, multipolar. The specifications require that these motors must take 50 per cent of load above rating without injury, and full load efficiency to be 89 percent. One 7½-H. P., 230 volt, series-wound motor is used for turning the 66-foot turntable.

POWER HOUSE.

This is a brick building on concrete foundations, with 13-inch side walls, and 13-inch center wall between boiler and engine rooms, these walls being strengthened by pilasters which support the roof girders and crane girders. The roof has a pitch of 1½ inches per foot, and is supported by 18-inch "I" beams in the engine room, and 36-inch built-up girders in the boiler room. Both engine and boiler rooms have plain common brick finish on the inside. The engine room has 6-inch concrete floor, and boiler room has vitrified brick floor, both floors being on the same level. On the west side of the power house there is a coal trestle, 8 feet from the outside of the building to the center of the track, the top of the rail being 12 feet above the floor line of the boiler room. This trestle is so arranged that coal being dumped from dump cars will run into the boiler room

POCATELLO OFFICIALS.

Master Mechanic, D. J. MALONE.

In Charge of Plant, CHARLES JOHNSON.

General Foreman, WILLIAM PETERSON.

Foreman Blacksmith Shop, JOSEPH DUCKWORTH.

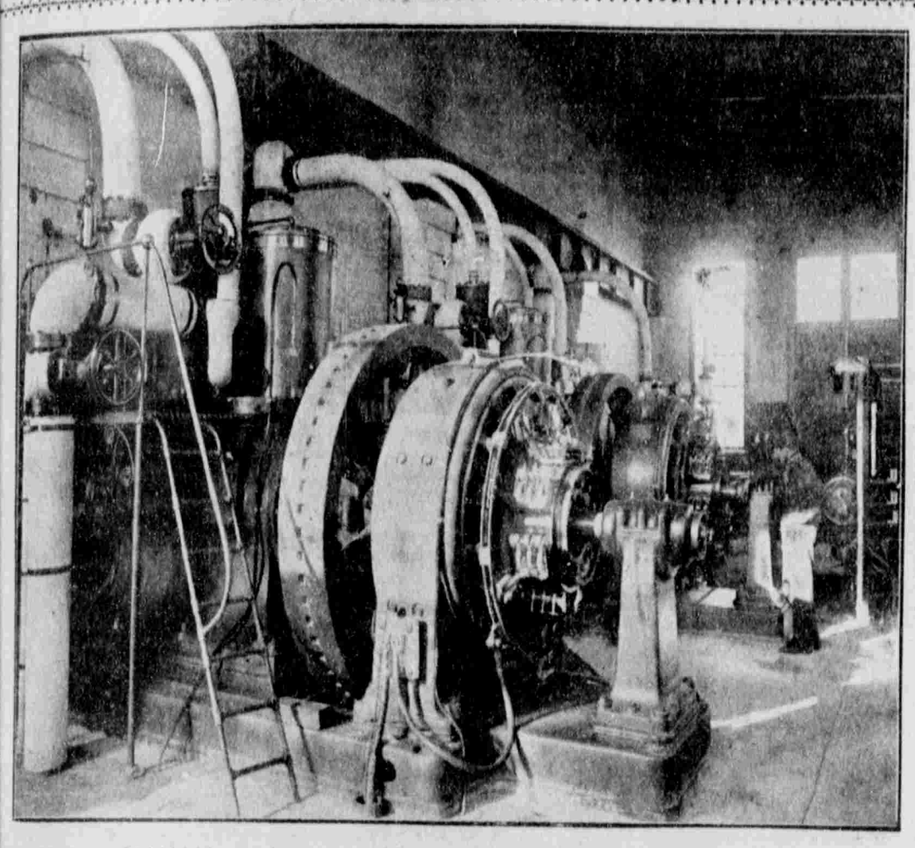
Foreman Machine Shop, PETER MITCHIE.

Foreman Copper Shop, FRANK MADDEN.

Foreman Boilermakers' Shop, JOHN MATHESON.

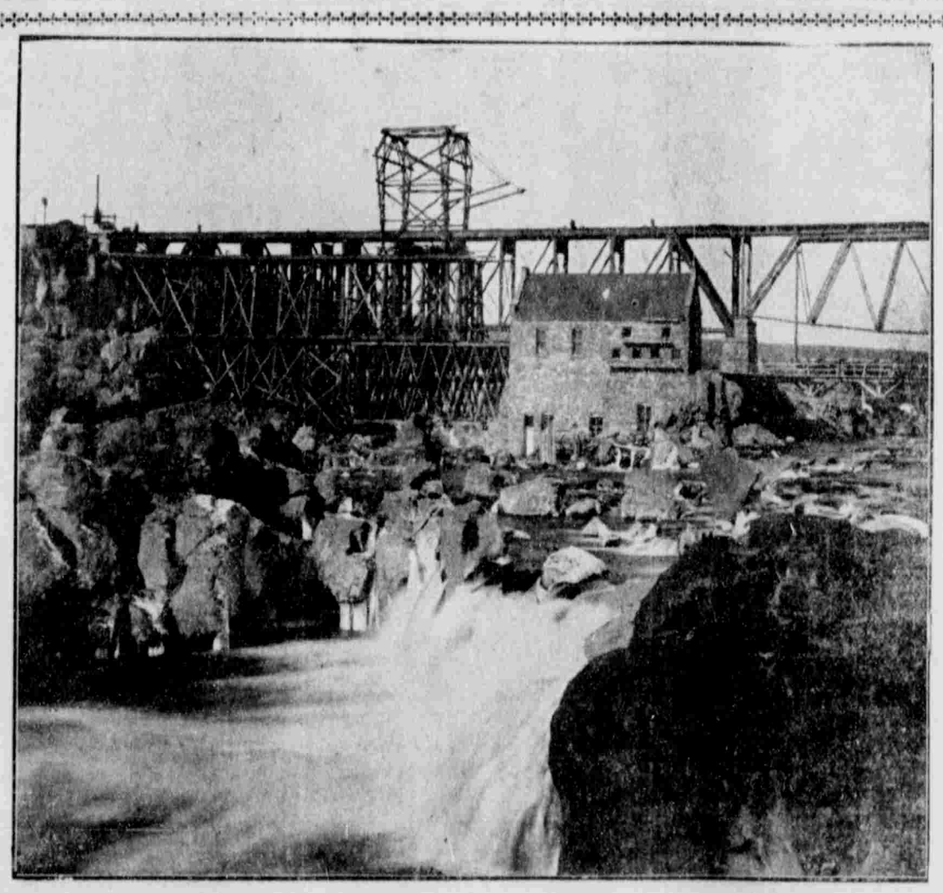
Foreman Truck Department, FRED MEYERS.

Foreman Air Department, WILLIAM STALEY.

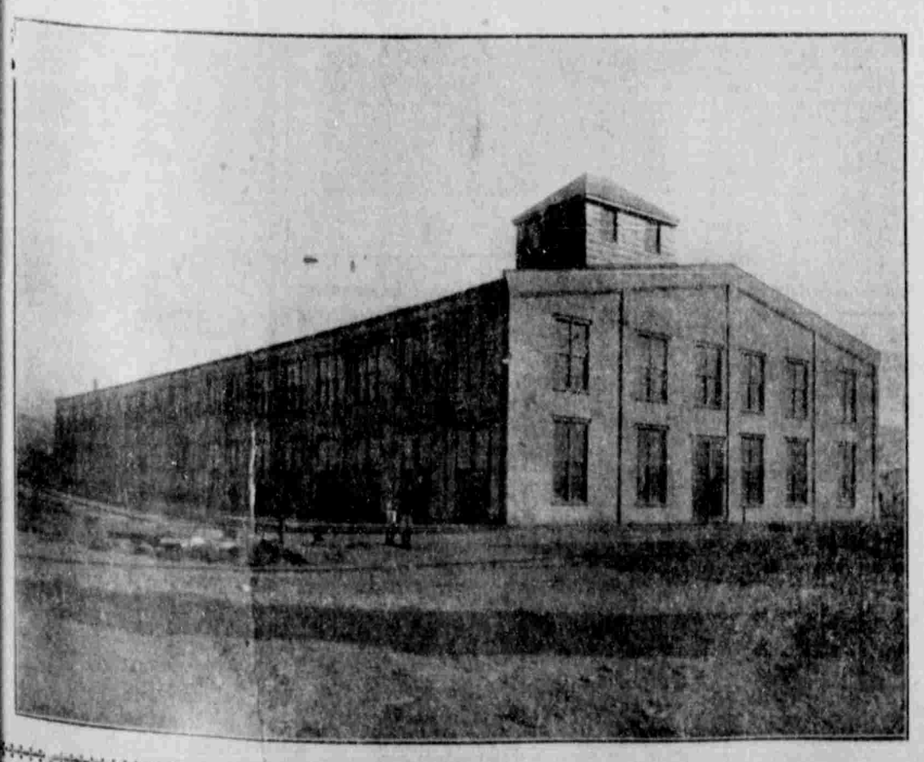


WHERE THE POWER IS GENERATED.

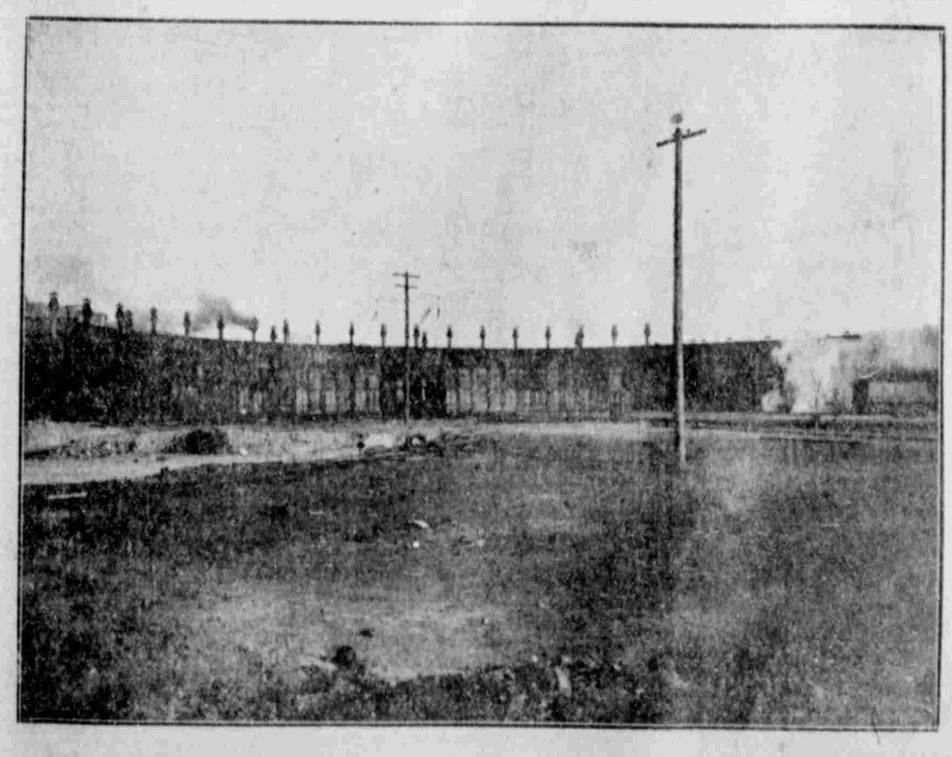
A CORNER OF THE MACHINE SHOPS.



POWER HOUSE AND O. S. L. NEW BRIDGE AT AMERICAN FALLS.



EXTERIOR OF POCATELLO SHOPS.



COMPLETED ENGINE HOUSE WITH TEN NEW STALLS.