

THE CATARACT FLOURING MILL.

The building of the flouring mill owned by the Cataract Mill company was one of the pioneer enterprises of Great Falls. The idea originated with H. O. Chowen of this city, and through his energy was carried out. In 1888 he interested Jas. Jamison of Minneapolis with him in the enterprise and the contract for the machinery was let to Messrs. Millford & Northway of Minneapolis. This was before the days of the Manitoba railroad in Montana and every pound of machinery had to be hauled by wagon train from Helena, over one hundred miles, or from Fort Benton, forty miles, so that to erect a first class mill in those days was no small undertaking. How well the task was performed in spite of the difficulties encountered is demonstrated by the excellent quality of the flour the mill is now turning out.

From year to year additions have been made to the machinery of the mill and improvements made in the system of milling till now the Cataract Mill company will guarantee to supply their customer with a flour fully equal to the best Dakota or Minnesota patents and at a considerably lower figure than eastern flour will cost laid down here. This is the only mill in Montana that does make such a guarantee for the reason that it is superior to all its competitors in equipment and in addition it is able to grind wheat far superior to that obtained by any other Montana mill.

This last result has been attained largely through the effort of the Cataract mill company in introducing the proper varieties of hard wheat and in getting the farmers to sow these varieties of seed. In the spring of 1888 the Mill company shipped several cars of Scotch Fife from Dakota for seed and in the spring of 1889 they shipped in a still larger quantity. This seed was sold to the rancher at cost and those who were not able to pay cash for seed obtained it from the company by giving a note payable after harvest in cash or wheat as the rancher preferred. Four years ago soft wheat of a doubtful character was the only wheat to be found in Northern Montana, but this fall not a bushel of wheat was brought to the mill that would grade less than No. 1 hard.

Northern Montana appears to possess a soil much better adapted to raising the hard varieties of wheat than the southern portion of the state. This company buys wheat from all parts of the state but can find none to give as good satisfaction as that raised in Northern Montana.

Here providence has certainly amply provided for the wheat grower. It has endowed him with millions of acres of as fine land as the sun ever shone upon; has blessed him with a matchless climate for grain growing as well as health; and in addition has blessed him with a never-failing home market. In this last respect perhaps the farmer here has a greater advantage. His wheat, all he can raise, will be consumed in the shape of flour by the mining camps and smelting cities right in his neighborhood. This latter fact guarantees the rancher for all time a good price for his wheat.

Another great advantage our farmers enjoy is that of the high yield per acre. In Minnesota the average yield, taking one year with another, is about seven bushels to the acre, while our rancher in a series of years, averages twenty-five to thirty bushels to the acre, without irrigation. This has been the driest season known to the oldest inhabitant here as well as in Dakota, but while the farmers of Dakota in many sections are suffering from want, on account of drouth the past season, our farmers have all done well and are contented with their lot. Several the past season, owing to late sowing, secured but half a crop or less, but in every such case the fault can easily be traced to their own neglect.

Wheat should be sowed early in Northern Montana; we usually enjoy several weeks of the finest weather imaginable during February, when the soil thaws to the depth of several inches and the air is as balmy as in May. During this period is the best time to sow wheat, but it sown in April or May it will do very nicely and numerous instances can be cited where wheat has matured when sown late in June, but it is wise to sow early.

The trade of a very great area of country is enjoyed by this mill. They send flour to all the towns north of here to the British line, east to the Milk river valley, westward to Helena, and southward to the Judith basin and Fort Maginnis, over 150 miles away; and in such demand has their product been the past season that at no time have they had any flour stored away.

The Cataract Mill Co. looks forward to a prosperous year both to the grain-grower and to the miller. Though the present mill has but seventy-five barrels per day capacity, the gentlemen composing this corporation propose to erect a large mill—150 to 200 barrels per day—as soon as the wheat production is

greater than the present mill can take care of. They find that our wheat here requires different treatment from that of any other hard wheat, owing to the peculiar properties given it by our Montana soil and air and it is only by constant and careful study that the company has been able to discover the proper way to treat the grain.

Montana has received a generous endowment from the United States for educational purposes. The public lands granted for that purpose are ample for the establishment of a university, an agricultural college, a school of mines and a state normal school. The rising generation in Montana will thus enjoy the best facilities for attaining a collegiate education, which will be free to all. The educational spirit is strong in Montana. It ensures that noble institutions of the highest merit will be founded.

BRIGHT PROSPECTS.

An Interview with Mr. Paris Gibson Regarding Great Falls.

Hon. Paris Gibson, who is always pleased to speak of the bright prospects of Great Falls, accorded the following interview to a TRIBUNE reporter, who was in quest of opinions:

"I understand your company is expecting to make large sales of Great Falls property the coming year, and that you are looking for an extraordinary growth of its population?"

"I feel sure of this. We are already making large sales of lots and many of them to the most experienced and the shrewdest eastern capitalists. Two years ago it was a question in the minds of some, whether our town would grow rapidly; but it is no longer a question, now that the Montana Smelting company and the Boston & Montana Copper company have both located their works here, and the great dam at Black Eagle falls is to be commenced this winter and completed within nine months. The man is stupid

who can not see that this place is to become at once the centre of great activity. The truth is no part of Montana is being developed as rapidly as Great Falls and vicinity. The output of coal at Sand Coulee is 1000 tons per day, and within two months it will be 1,500 tons daily; the Belt Mountain railway will be completed next spring, and as a result, Great Falls will get an immense ore and merchandise traffic. The extension, also, of the Manitoba railway westward from Great Falls will add much to the confidence of investors in this place, as it will be the most prominent point on the main line. The western shops of the Manitoba railway are soon to be located here, and this alone, will add five thousand people to Great Falls.

"Do you think Great Falls will become an important commercial as well as manufacturing center?"

"Certainly I do. Our town is already doing a very large trade over a rich country 125 miles to the east, and as many miles to the northwest. The truth is no other town in Montana has as large and as good tributary country and it will soon become one of the most important distributing centers west of St. Paul."

"Do you think the Anaconda refineries will be located here?"

"As to that, I cannot state, but of this I am sure, if the best location is to be selected, they will come here."

"Do you expect there will soon be located at Great Falls other enterprises that will give steady employment to laboring men?"

"Yes; we expect that the Boston & Montana company will manufacture sheet copper and copper wire. There will also be built at Black Eagle falls a large and well equipped flouring mill, a woolen mill and a foundry and machine shops. The quarries of red, brown and white sandstone that surround our town will also give employment to a large force of men, as this beautiful building material will be shipped to Helena and to all the prominent cities on the Pacific coast, including San Francisco. I think it no exaggeration to state that Great Falls will give employment to more men next year than any other town in Montana, except Butte.

The estimates for the Great Falls dam show that it is to be an industrial undertaking of the largest kind. The builders of this immense dam display firm confidence in the growth of our city when they undertake such a structure, which will far exceed in magnitude any work of the kind in the northwest.

CASCADE COUNTY COAL FIELDS.

The Sand Coulee and Other Measures—As True a Bituminous Coal as is Found in the United States—Immense Extent of the Field.

(By DR. G. C. SWALLOW, State Inspector of Mines.)

Cascade county while it has a scant supply of timber save in the Highwood mountains, is favored with a vast amount of excellent coal well distributed over the county. Coal beds have been opened on Sun river below Sun River Crossing, in the Missouri river bluffs north of Elm, on Willow creek, on Hound creek, and Deep creek both above and below the mouth of Hound creek, in Sand coulee, on Belt creek and on Otter creek.

WILLOW CREEK COAL.

There is an outcrop of excellent coal on Willow creek south-east of Cascade and at the base of the northern extremity of the Belt mountains. The strata here are very much disturbed and broken up, so that it was impossible without more work to tell the extent and thickness of this bed.

DEEP CREEK COAL MINES.

The Deep creek coal bed has been opened on Hound creek, on both sides of Deep creek below the mouth of Hound creek, and on the east side above. From a tunnel on the east side considerable quantities of the coal were shipped to Benton and Sun River and other markets.

This coal bed is about six feet thick and covers considerable area as shown by the openings made on it. It comes to the surface in Spanish coulee; but has not been opened to prove its quality or quantity at that locality. This coal must prove useful, as it will furnish very large quantities of excellent fuel.

SAND COULEE COAL MINES.

At Sand coulee the same coal bed has been traced over a large area, where it occupies a position most favorable for mining and transportation. This coal

Grand Forks, Dak., and at the Great Falls and other reduction works, have given this coal a reputation and made a demand for it greater than the mines now worked can supply.

This coal has been used raw for smelting our copper ores and pronounced an excellent fuel for that purpose.

The physical properties of this coal, the numerous analyses of it, and its use for all purposes, fully prove that it is an excellent fuel for domestic use, for generating steam and roasting ores; that the lower part will make good gas and coke, and that the middle part is a block coal suitable for use raw in smelting furnaces. The Sand Coulee coal is hard and strong, breaks in large blocks, and makes very little dust and waste in handling. It is a clean and popular domestic coal.

FACILITIES FOR WORKING.

Nearly all the coal at Sand Coulee is sufficiently high above the railroad to be dumped directly into the cars on the track, and give ample space for shoots, screens and all necessary appliances for the cheap handling of coal. The cap of the coal is a hard, strong shale and thick beds of strong sandstone. It is impervious to water, save where cracked, and secures dry air and comfort to the miners. Little or no timbering is needed to make the mine safe. This secures cheap and healthful working and safety from fires. The upper shale parting makes a strong roof for working the lower six or seven feet of the bed, when desirable to work the two parts separately. The bed rises sufficiently to the west to secure perfect drainage towards the railroad, as in the present tunnel, whose mouth is only a few feet from the track of the railroad. This dip of the bed to the east will not only give a good drainage to the mine but also enable the coal cars to run out by their own weight, or with very little assistance. Very few coal mines are so favorably located for economical working and cheap transportation to market.

BELT CREEK COAL MINES.

The same coal bed found on Deep creek and at Sand coulee has been opened in several places on Belt creek at Belt city. The position of the coal bed is nearly horizontal and sufficiently above the bottom lands to be mined and put in cars and wagons at very low rates, nearly as above described under Sand coulee coal. The quantity and quality of the coal on Belt creek, is the same as that described at Sand coulee. In fact it seldom happens that the coals at two localities on the same bed so far apart as Sand coulee and Belt creek, agree so perfectly in position, thickness and character of the vein, and in quantity and quality of the coals, and facilities of working.

Sand coulee has the advantages of position for loading cars, and being in the midst of the best agricultural region on the upper Missouri, and Belt creek has the advantages of an abundance of water and a large supply of timber in the adjacent Highwood mountains.

COAL ON MISSOURI AND SUN RIVERS.

There are two coal beds in the bluffs on the south side of Sun river, two miles below the crossing. One of these beds is four feet thick and of medium quality. The other bed is thin and would not pay for working while labor and coal command present prices. These beds are nearly horizontal and sufficiently high to be worked with ease.

A bed of coal similar to that on Sun river crops out in the bluffs of the Missouri below Elm. It also comes to surface in a coulee between Sun river and the Missouri. These facts in connection with the horizontal position of the rocks between Sun river and the Missouri indicate the continuation of these beds of coal in the bench lands between those rivers.

A coal bed also crops out in the bluffs on the northeast side of Sun river in places for several miles. This coal bed doubtless underlies a large area in the bench lands to the north and east.

MUDDY CREEK COAL.

One or two beds of coal similar to those on Sun river have been opened in several places on Muddy creek in the northern part of the county. These beds will be useful to supply the local demand for domestic uses.

QUANTITY OF COAL IN CASCADE.

The coal beds at Belt creek, in Sand coulee and on Deep creek will yield 6,000,000 tons per square mile. As the area underlain by this coal at each of these locations has not been determined,

it is impossible to tell how many square miles within it; but it is safe to say they cover an average of six square miles at each of these localities and probably many more, and will furnish 36,000,000 tons of marketable coal or a thousand tons per diem for the next hundred years. By the time these coals are exhausted some better mode of warming the cold regions and lighting the dark hours will be discovered. The amount of coal on Willow creek, on Spanish coulee, on Sun river, on Missouri river, and on Otter creek can not even be conjectured from the small amount of work done at those localities. But enough is known to say these localities will furnish all needed supplies for domestic uses, and that Deep creek, Sand coulee and Belt creek mines can furnish an abundant supply for all manufacturing, mining and transportation purposes.

THE VALUE OF CASCADE COALS.

The Cascade coal mines are situated in the midst of a vast prairie country, which is rapidly filling up with a teeming and industrious population, whose homes must be warmed and lighted, whose factories, whose railroad trains, whose machinery of all kinds must be propelled by coal. These mines are seventy miles from the nearest timber on the west, one hundred and seventy miles from the Dominion and much further from available timber on the north. Six hundred miles from the nearest accessible borders of timber in Minnesota, and with very little timber and none to spare even to the Gulf of Mexico on the south. And this is in the midst of a great building, manufacturing and mining population, and vast systems of railroads, which will soon exhaust all available timber and be wholly dependent upon our coal beds for fuel! And all this present and prospective growth of populations and industries under the 47th parallel of north latitude, where we sometimes feel the frozen-breath of the Polar bear!

These mines, too, are near the junction of Sun river and the Missouri and Great Falls, the most beautiful and fertile region of the northwest, and destined to become as populous as the valley of the Hudson.

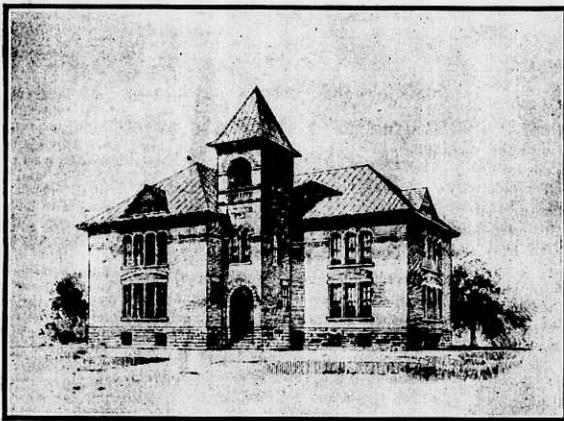
Those who doubt our growth should study the history of Chicago, St. Paul and Denver. There are ten times the reasons why Great Falls should become a great city than there ever was why Denver should become the queen city of Colorado. Montana is the greatest mining country in the world, and its mines are as yet scarcely prospected. Our agricultural resources are limited only by the amount of water, and that is increasing every year and will increase by natural laws as cultivation progresses.

The Cascade is the best and most available coal for the present and prospective demands of this growing region. These coals will play their full part in warming the cities of the plains and the cities of mountains, in running the machinery and in heating the furnaces of a thousand mines, and in running the trains of two great systems of transcontinental and meridian railroads. No coal, as we have shown, is better adapted to supply the varied wants of such a population. Its varied properties, its cheap mining and its available means of transportation, and the present and prospective demand make this one of the most valuable coal regions in the Great West.

GREAT FALLS is the first large city on the Missouri. There is something inspiring in being at the head of that long chain of cities, which includes Omaha, St. Joseph, and Kansas City, not to speak of the flourishing towns which line the banks of the great river and its tributaries. Great Falls will do credit to the Missouri. In natural advantages she is not excelled by any city on the mighty waterway.

MANY people wish they had gone to Chicago when it was young. Others wish they had removed to St. Paul or Minneapolis in early days when land was cheap. Let all who are in quest of a young city whose manifest destiny is to be prosperous and great, come to Great Falls. They will not be disappointed.

It is noteworthy that strong financial institutions are turning their attention to Great Falls and the surrounding country. President Menage of the Northwestern Guaranty Loan company of Minneapolis was so impressed with the growth of Great Falls that he established an agency here and authorized loans to be made freely. The Jarvis-Conklin Mortgage Trust company has likewise an agency here, which is cultivating business rapidly. These companies discern that Great Falls real estate and Cascade county ranches form good security for loans and that the borrowers are able and willing to pay reasonable interest.



NEW BRICK SCHOOL HOUSE AT GREAT FALLS.