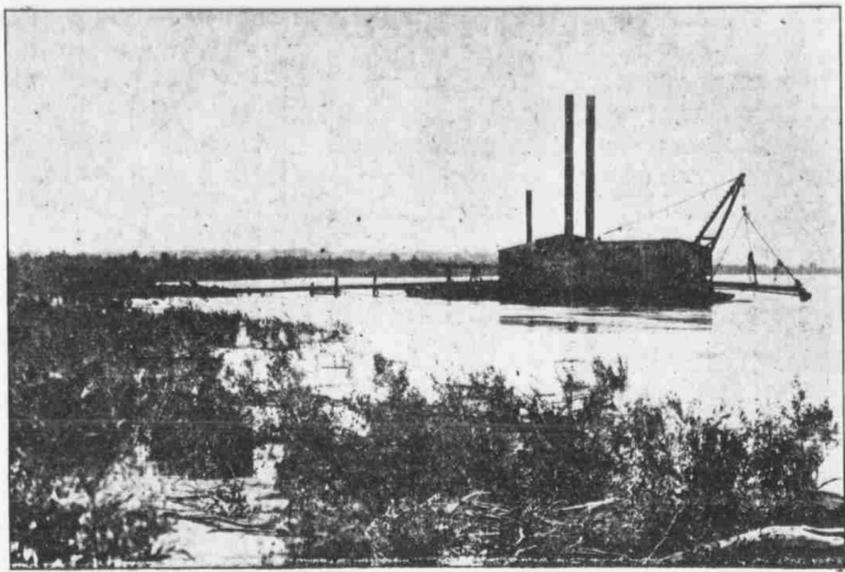


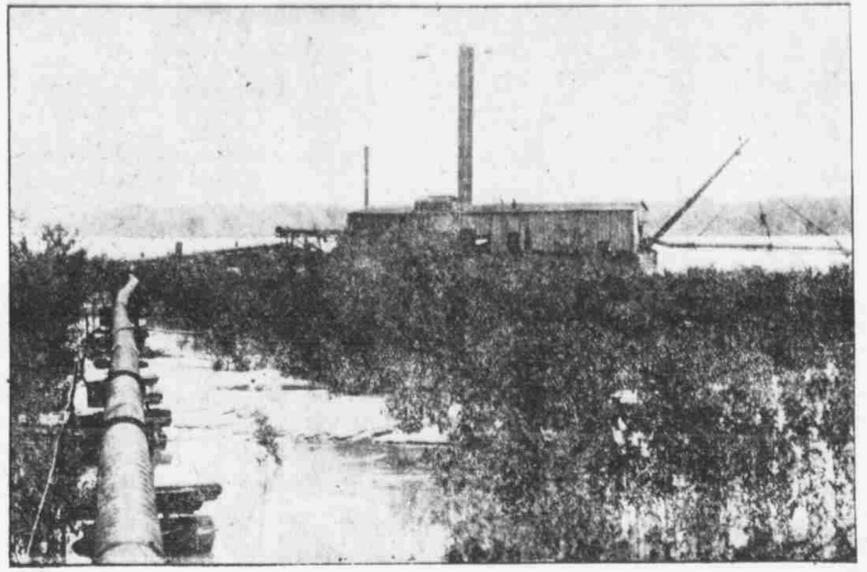
How the Union Pacific is Putting Missouri River Mud to Practical Use

SOME time in the future the Union Pacific legal department may have to deal with a question that will be as interesting, if not as intricate, as any connected with the passenger or freight tariffs now in dispute.

Several times the Missouri river has brought into court the question of who owns the farm, the man whose land is on top of the river or the man whose land was on top before the river got in its voracious work? Just at present the Union Pacific is busy piling on some of its shop grounds, thirty acres in extent, a layer of real estate recovered from the river which is to be six feet in thickness and of equal area. Now, six feet of soil thirty acres in extent is a pretty respectable farm, especially when it is adjacent to the business portion of a great city like Omaha. For this reason the owner of the real estate in South Dakota, prior to the time it started down stream, may appear and put in a claim for his farm, and, under the law, he would be clearly entitled to take his property where he finds it. This would make it a trifle awkward for the railroad company, but it costs scarce business the proposition that the claimant would have to identify his real estate before the court would permit him to enter upon it. It might bother him somewhat to pick out the particular particles and specifically establish his ownership to each, so that maybe, after all, the company is safe in doing what it is.



WHERE THE DREDGE WORKS.



PIPE LINE ACROSS THE BOTTOMS.

Process Not a New One.

It is merely sucking the bottom out of the river, or, rather, the mud out of the water, and using it for filling on a piece of low ground. This is not an especially novel proceeding, although this is the first time it has been attempted. The principle was long ago adopted by the engineers engaged in constructing levees in the Mississippi delta. Down there it was not so much a question of building new ground as it was of a new channel, and the mud pumped was merely carried to a convenient distance and dumped into the river, where it could not be washed back into the channel being prepared. When the Santa Fe railroad was seeking admission to San Francisco, it found its entrance blocked, and in order to secure depot grounds and terminal facilities a few thousands acres of the bay were purchased, and then the process of filling one part of the bay with sand pumped from another was resorted to. By this means the Santa Fe has provided itself with ample yard room in San Francisco. After the great disaster at Galveston it was decided to raise the entire town, and some elevated a replication of the tidal wave would be inevitable. This work was also accomplished by pumping mud from the Gulf of Mexico inland and allowing the water to run back. In this way the most stupendous undertaking of the sort ever set afoot was easily and speedily finished. Elsewhere the engineer has made use of the same expedient and always with success.

Need of the Missouri.

The Missouri river is admirably adapted to the purpose. Its bottom is primarily of rock or basalt, which is nearly the same, but over this is a deposit of silt varying from thirty to 100 feet in depth, and which is easily removed by pumping. If it were not so, in present conditions, the river carries such an immense load of silt and sand in its ordinary course that just pumping the water would soon provide the needed filling. The engineer in charge of the government work on the river estimated that for the year 1901 the Missouri river moved more tons than all the railroads in the United States combined twice over. That is to say, the amount of mud

carried by the river amounted to just a little over twice as many tons moved one mile as the freight carried by the railroads of the United States for the same year. This gives some idea of the mighty work done by this wonderful stream, as well as of the amount of silt carried in suspension. A few years ago a test made of water taken from the midchannel of the river near the Douglas street bridge showed that about 500 pounds of mud per 100 gallons of water was the proportion. This would make about one pound of mud to forty gallons of water. So it is not likely the Union Pacific will run short of material, even if the bottom of the river doesn't hold out. It is equally certain that whatever hole is made in the bottom by the removal of the 250,000 cubic yards of earth necessary to make the fill will also soon be redeposited by the river, the material being brought down as it has for ages from the alluvial plains between Omaha and the pass in the mountains from which the great river debouches.

Rebuilding the Shops.

The remodeling and enlarging of the Union Pacific railroad shops in Omaha, which has been carried on during the last three years, has made necessary some extraordinary methods in raising the grade of the land upon which the additions to the plant are being built, between the present shop buildings and the river lies a territory of about thirty acres upon which there have been tracks formerly, but which is about six feet below the level of the ground to the west. It was for the purpose of raising this tract of land that the railroad company let out a contract to a dredging company of Kansas City and the dredge has been at work since spring.

The machine was brought up the river with the steamer Omaha, carrying a crew of six men, including a captain, fireman,



WHERE THE PIPE DISCHARGES.

engineer and three deck helpers. This force was increased to sixteen men when the work was begun, the extra men being

used on land while the silt which the dredge draws from the river is being

dumped draw from the river is being dredged, which is run through pipes

extending out across the land. The loose mud pours from the funnels and spreads out over the surface of the ground, while the water contained in it comes to the top and is drained off without difficulty. It is estimated that the capacity of the machines when running at full pressure is over 1,000 cubic yards of dirt in a day. Even at this rate it will probably take the rest of the summer to make the thirty acres which is being raised a level tract six feet higher than it now is. It may be necessary to take from the river bed 250,000 cubic yards of mud before the work is accomplished. When it is raised to the desired level the land will be used partly, as before, for trackage and partly for building sites. A huge plant such as the Union Pacific shops grows so fast in capacity and extent that there will be no trouble in finding use for all the land that can be made available.

Work of Three Years.

Not many Omaha people are aware that during the last three years the entire construction plant of the railroad has been so completely changed that hardly a department remains the same. In the present year alone a new machine and several store buildings have been added. The old boiler shop has been remodeled into a power house, and a new smokestack, which towers to a height of 200 feet and 6 inches was raised beside it. Another feature of the power house is a coal trestle which makes it possible to dump coal directly into the bins from the cars. The new machine shop is 150x298 feet in extent, built of brick, steel and concrete, on a foundation of piling. Just north of it is the boiler shop, which is almost as large and of similar construction. The largest of all the buildings contemplated is the new car shop which is now being built. The passenger department, where

the coaches will be built, painted and upholstered, will be 175x142 feet deep. The front car porting will be as long as 100 feet in width building. Two other additional buildings, a paint and wheel shop and a paint store house, will soon be erected.

Water, heating, sewer and pipe systems in the yards are kept in a continual state of repair because of changes which are being made. The tracks as well as constantly being torn up and moved. During the year 1906 over thirteen miles of tracks were moved and a mile and a sixteenth additional were laid. This includes only standard gauge trackage, however, and the narrow gauge operations were as extensive.

Plant is Always Growing.

During the same year were built an office building, where the offices of the mechanical departments are housed, a blacksmith shop and an iron house, the three covering a combined area of over 50,000 square feet. In the office building are the laboratories, where all chemical work necessary in construction is carried on. As it grows out toward the river the great car and locomotive building plant will extend over the ground which the dredge is now bringing up from the bottom of the river. In its present open conditions it does not look very solid, but it settles into the holes and packs dry into firm earth. If for no other reason the Union Pacific should be congratulated for having found a practical use for Missouri river mud.

Sioux Indians Gather for a Pow Wow and the Forbidden Sun Dance

EARLY in April, 1907, at a council of the chiefs of the Sioux Indians, it was decided to hold a last great meeting of the Sioux tribes on July 4. The place selected for this assemblage was on the Little White river, near the Rosebud Agency, S. D. Major Kelley, the Indian agent, contacted the celebration and that all the traditions of the tribe would be carried out. With the usual speed of Indian communication, the news was passed from camp to camp, and from tribe to tribe, and the hustle and bustle of preparation began. The squaws made bead work, red work, leather work and gay bonnets and dresses of feathers and furs, to be used in the dances and traditions of the tribes. Two weeks before the Fourth all was in readiness for the start and they commenced their long drive to the grounds. On the night of the 2d 10,000 Indians were encamped around the great circle to be used for exhibition purposes.

Picture in your mind a circle one and one-half miles in diameter and closely surrounding the edge of the circle, side by side, 4,000 tents and tepees, in many places eight or ten deep; picture inside of this circle at the north, a half-mile circular race track; at the south a great yard, containing wild horses for the bronco busting contests, and cattle for the roping contests, and in the center an elongated square, 200 by 100 feet in extent, surrounded by rude shade of boughs, with an opening at either side, and in the center the sacred pole, which is to be used in the sun dance and "give-away" ceremony.

In preparing for the sun dance a young virgin is selected by the women of the tribe, to have charge of the proceedings. Before sunrise on the morning of the dance she leads the way to the woods and selects a straight tree, six to eight inches in diameter and about twenty feet in height. Taxing a new axe, which has never been defiled by striking timber, she strikes the first blow to fell the tree. A young brave then climbs the tree, cutting off the boughs as he ascends except the ones at the very top. Any one wishing to enter the dance may then throw him a larlet of rawhide or braided hair, the end of which is attached in the tree top, while the lower part is split and hangs down the pole. He then descends from the tree and it is cut down, but it must never touch the ground from the time it is chopped down until it is planted in the dance ring.

This dance is for the fulfillment of vows made to God. For example, an Indian's child may be very sick and expected to die. The Indian vows to his God that if he will spare the life of the child he will sacrifice 50 pieces of his flesh from some part of his body at the next sun dance. Or, if an Indian has a bitter enemy, whose life he seeks to take, he vows to his God that in case the deed is accomplished he will dance around the sacred pole a certain number of hours.

The giving of gifts is also a part of the sun dance. An Indian household will many times take to the sun dance all of their belongings and give them to their friends. This custom was to illustrate

the feeling of friendship and good will between one another, and at the time when these dances were held every year resulted in little loss to anyone, as if one did not receive as much as he gave at that time, he would probably do so at the next dance.

At the hour when the dance is to be held the multitude assembles in and about the ring and the virgin announces that their God is calling upon them to do acts of friendship and benevolence and to do acts of bravery and courage and endurance in fulfillment of past vows. The givers of gifts then spread their gifts in the center of the ellipse and call upon their friends to come forward and receive them. The gifts consist of all kinds of bead work, leather work, furs, trunks full of gorgeously colored cloth, horses and saddles and sometimes bugles and wagons.

If the Indian has vowed to sacrifice a certain number of pieces of flesh, the medicine man of the tribe takes a sharp knife and cuts the required number of pieces from some portion of his body. If the vow was to dance around the sacred pole, the medicine man cuts two slits from either breast and beneath each of the strips of skin so left he introduces one of the parts of a larlet that hangs from the pole. The Indian must then dance and jump and heave upon this larlet until the strips of flesh are torn out or until he faints from exhaustion, when the medicine man cuts the flesh and lets the thorns out—they must never be untied. At the last sun dance held in this territory one Indian danced for fifty hours without food or drink.

On the morning of the Fourth, after the sacred pole was erected, an Indian attack on an immigrant train was very realistically enacted. A slow traveling train of

immigrants was attacked by a band of 1,000 mounted braves in full war paint, who were making sad havoc until they were put to flight by a force of Uncle Sam's Indian police. The next on the program was the grand charge around the camp circle by perhaps 4,000 mounted Indians, who made the hills ring with their war cries, as they charged madly around the circle, a distance of four miles.

The thousands assembled then began a movement toward the dancing ring, and the give-away ceremony began. This had been in progress nearly an hour when the news reached Major Kelley that they were conducting the forbidden sun dance and give-away. Major Kelley was soon on the ground with a force of Indian police and the crowd was ordered to vacate the dance ring, and the sacred pole was taken down. Chief Hollow Horn, the chief in charge of the ceremonies, was ordered to strike camp and go home, and not to return to the celebration under penalty of being placed in the guard house. This aroused the ire of the old warriors, many of whom could boast of a score of scalps, and there was much talk of going on the warpath. Many of the old chiefs made eloquent speeches and pleaded earnestly with the major to be permitted to carry on the dance, and were furious at his refusal. Only the cool head, the steady nerve and the iron will of Major Kelley averted bloodshed. Finally seeing that it was useless to plead their cause longer the braves sullenly submitted to the inevitable. The tears silently flowing down their weathered cheeks, this solemn closed the celebration for the older Indians. Their hearts were no longer turned to the gladness and joy of enacting the old traditions, but to the fact that never again could their beloved sun dance be given. There were

still a few dissenters among them, but reason finally prevailed. If you were a Sioux, your father's father's children and your mother's sister's children would be your brother and sister, their children your sons and daughters, but your mother's brother's and your father's sister's children your cousins, while their children in turn would be counted your nieces and nephews.

In former days an Indian married his wife's sister, too, and as father to all their children, these children were in a sense brothers and sisters. In that way these intricate connections existed. Now very few Indians do this, for civilization and Christianity have changed all this. But most of the middle-aged Indians of the present day are children of men with sev-

eral wives. So the children in school now are related to a degree entirely too common a problem for their teachers.

In one of the government schools one of the teachers, ignorant of all this, was consoling a little girl who had lost her mother. "I have another mother," said the child. The teacher was amazed until it was explained to her that the dead woman was, according to our way of counting, only an aunt.

Another teacher, also new, had a group of children out walking. They met a man in a wagon. "Who is that?" asked the teacher. "My father," spoke up one of the children. In a few moments a horseman passed them. "My father," said the same child. Although amazed, the teacher said nothing.

A Live One at 102.

CREDITING his years to the free use of whisky, beer and tobacco, Joseph Zeitlin of No. 126 Lexington avenue, Brooklyn, celebrated his 102nd birthday last week by indulging in an extra allowance of drink and smoke.

Mr. Zeitlin emphatically denied that drinking is bad for the health. He has not been under the influence of liquor for many years, and yet he has not passed a day for more than fifty years without taking about ten drinks of whisky or beer.

He is strong and vigorous, and yesterday went for a long walk and played with his great-grandchildren. He appears to be from twenty to thirty years younger than he is. His appetite is good, and he said he

did not feel any older than he did twenty years ago.

Born in Lodz, Poland, July 3, 1805, Mr. Zeitlin made a fortune as a manufacturer, and came to this country twenty-five years ago to spend his last days with his daughter. His theory of eating and drinking is to take what he wants when he wants it. On some days he eats five or six meals and on other days only one or two. He drinks on the same plan, taking whisky or beer whenever he feels inclined to do so, but varying the monotony by taking a few drinks of cordials or wine every day or two. He prefers strong Havana cigars and makes his own cigarettes.

A Lightning Prank.

Lightning played a prank at the Paducah

Squirrel Whips a Snake.

The story of a battle between a squirrel and a large blacksnake is reported by John Withers, a prominent farmer, who lives north of Carrollton, Mo. Mr. Withers has some pet squirrels on his farm, and a few days ago, when he went to feed them, he noticed a commotion going on in the squirrels' nest. In a few moments a red squirrel emerged from the hole in the tree, dragging a blacksnake.

Both were fighting desperately. The snake was at a disadvantage, however, for the squirrel had a strangle hold behind the snake's head and shook his unwieldy antagonist much as a dog would a rat. The snake endeavored to encircle the little squirrel with its coils, but could not do so, and presently both the snake and squirrel fell to the ground, the squirrel still retaining its hold on the snake.

Mr. Withers stepped up and the squirrel released its hold and scampered back up the tree. The snake, which measured nearly six feet in length, was nearly dead, and was dispatched by Mr. Withers.

Millions for Babies.

"If my sons marry I will double their incomes, and if they have children I will again increase their incomes, and also provide that each child shall have an estate worth \$250,000."

This summary of a remarkable provision in the will of the late John B. Stetson, the millionaire hat manufacturer and philanthropist, was made public in Philadelphia. In brief, the will of the aged man practically makes every child, born to his sons a "millionaire baby." Having left about \$7,000,000, Mr. Stetson was in a position to make these provisions, if a normal number of children are born to the sons,

Two Incidents Connected with the Unveiling of the Schiller Monument



BUST JUST AS THE VEIL DROPPED.



SCHILLER SINGING MAIDENS.