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Mason-Walsh-Atkinson-Kier Co.

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SAFETY DEPARTMENT MASON-WALSH-ATKINSON-KIER CO. BUILDERS OF COULEE DAM

MASON CITY WASHINGTON

Vol. 1 No. 24

M. Pete Shrauger--Editor Safety Engineer

December 6. 1935

THE CONVEYOR SYSTEM

An Alladin-and-his-lamp performance that is not a fable but has far surpassed construction records of the past is the result of new methods of work at Grand Coulee dam scenes. The conveyor system for handling muck began with members of the present contracting company in 1931-32.

Here the system has received its most severe test in handling more than 12,000. 000 cubic yards of material, transported and dumped over a mile from its source, at the rate of 620 feet a minute, a lift of more than 500 feet, a peak dumping rate of more than a ton a second.

The most difficult of the test is over. The west side is now a rock basin. The east side has perhaps 1,000,000 yards yet to be removed.

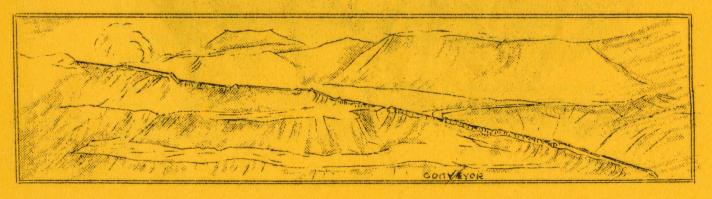
ing system shows its development, simplein the light of present results-but a

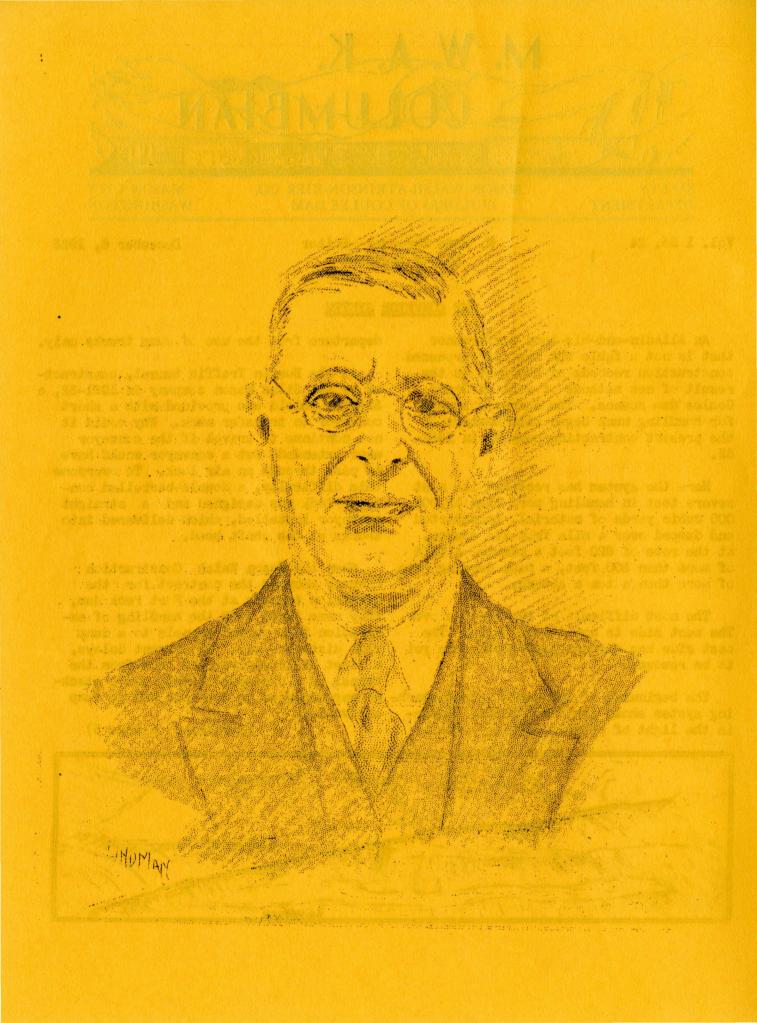
departure from the use of dump trucks only.

At the Boston Traffic tunnel, constructed by the Silas Mason company in 1931-32, a 31-foot shield was provided with a short conveyor to transfer muck. Why could it not continue to travel if the conveyor were extended? But a conveyor would have to pass through an air lock. To overcome this difficulty, a double-barrelled conveyor lock was designed and a straight conveyor installed, which delivered into trucks at the shaft head.

When the Mason Walsh Construction company secured the contract for the diversion tunnels at the Fort Peck dam. they were faced with the handling of excavation from curved tunnels to a dump some distance away. To prevent delays, a fleet of trucks carried muck from the tunnel to a conveyor feeder, and a stack-The beginning of the world record-smash- er was designed to transfer and to dump excavation.

(Continued on Page 5)





MR. L. E. PARKER

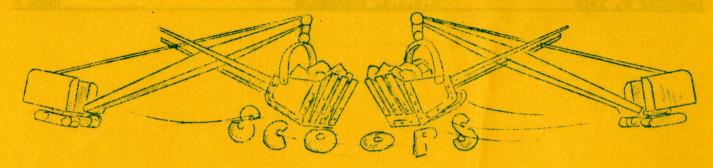
Mechanical Engineer of the Mason-Walsh-Atkinson-Kier Company.

Mr. Parker was born in New England and attended Lowell Institute, a branch of Massachusetts Institute of Technology.

In 1906 he formed the Parker Brothers Iron company in Boston, Massachusetts, and in 1917 joined the engineering firm of Monks & Johnson where he was in charge of purchasing and layout of all machinery and handling equipment for Bethlehem Shipbuilding's Victory plant at Squantum, Massachusetts. At the same time he was building, at his own plant, steel hulls for submarine chasers. Later he went to work for Mr. H. L. Myer as mechanical superintendent of the Gillespie Loading company's plant at Morgan, New Jersey, during the War. From 1919 to 1920 he was Chief Engineer of the National Conduit & Cable company at Hastings-On-The-Hudson, New York. He sold his business in 1921 to his partner and became interested in real estate and building in Florida.

He established another business in New York, developing municipal equipment which, at the present time, is being sold in all the important cities in the country. Later he licensed the patents to the American La France company and then went with Silas Mason company on the East Boston vehicular tunnel where he developed the first system of conveyors for removing muck through compressed air locks. At the completion of the East Boston tunnel, Mr. Parker went to work for Mason & Hanger company in New York, developing patented equipment which was used on the Midtown-Hudson tunnel at 38th street.

The Mason-Walsh-Atkinson-Kier company is fortunate in having Fred on the Grand Coulee dam, as his mechanical and inventive ingenuity can always be relied upon whenever difficult mechanical problems present themselves.



Smith's parrot was an amazing mimic. It could imitate human voices, motor horns, said, "and I ought to be there." barking dogs. Smith repeatedly boasted that it was the world's most intelligent parrot.

But they spent a holiday on the farm, and that was the bird's undoing. Being a dam dweller all its life, it was confused by the farmyard noises, and since its return persists in shouting "Quack-adoodle-moo!"

Two old ladies, evidently strange to traffic regulations, were obeying the instructions: "Cross on the white lines."

"They might have made the lines a little wider, mightn't they, dear?" one remarked to the other.

ONE MAN GAINED HEIGHT FROM AN ACCIDENT --BUT WHAT COULD YOU GAIN??

The top sergeant sang out before the company was dismissed:::

"All those fond of music step two paces forward."

With visions of a soft job in the regimental band half a dozen stepped out.

The sergeant growled: "Now then, you six mugs get busy and carry that piana up to the top floor of the officers' quarters."

What we need is less war and war talk, and more righteousness, Christian charity, turkey and pumpkin pie.

A Company engineer had been drawn on a Federal grand jury and did not want to serve. When his name was called, he asked the judge to excuse him.

"We are very busy in my department," He

"So you are one of those men who think your Company could not build a dam without you, " remarked the judge.

"No, your Honor," said the engineer. "I know it could get along without me, but I don't want them to find it out."

"Excused," said the judge.

"Can you see figures in the fire, Jack?" "Yes. dear."

"What figures can you see?" "Fifteen dollars a ton."

Women like to think that a bachelor is a man who has been crossed in love. A bachelor suspects that a married man is one who has been double-crossed.

The Scotchman had fallen into the well, and while swimming around in it, called to his wife. She came running to him and asked, "Shall I call the fired man from the field to pull you out?"

"What time is it?" he inquired.

"Eleven-thirty."

"Well, never mind," said he, "I'll swim around till dinner time."

YOU, NOT THE MACHINE, CAN PREVENT ACCIDENTS

Sambo had found a job for a week with a labor crew and was taking leave of his family, when his wife came to the door and shouted, "Come back heah, Sam. You hasn't cut a stick of wood fo' de stove--and you will be gone a week!"

"Honey," said the negro in an injured tone, "You must think ah'm takin' th' axe.

THE CONVEYOR SYSTEM (Continued from Page 1)

These early methods are the bases for the use of conveyors at the Grand Coulee, where even the granite contour prohibited any serious consideration of the use of a railroad or truck road. Rattlesnake canyon, with a floor 150 feet above the river was a good place for dumping excavation, but even here the rim elevation was about 500 feet above the river.

To meet difficult natural conditions here, the conception, design, nanufacture and installation of the huge system took only three months. The conveyor system began work December the 13th. 1934.

The main system has a hub centrally located at which branch conveyors converge. At the peak of west side openations, four laterals were used. Two at capacity can assure a full load for the main conveyor, but more can assure a constant load. At the hub an operator controls a surge feeder, the function of which is to load uniformly and at capacity.

A fleet of trucks or caterpillar-drawn wagons feed through a grizzly of steel Ibeams with 13-inch openings. The grill filters excavation materials. Whenever boulders are too large to pass through, they are pushed off by a bulldozer, which also crushed shale-like material through the grizzly. A shovel places rocks into trucks which haul for rock fill purposes. The battered condition of grizzlies suggest what might happen if sieving of excavation were not done.

B Beneath each grizzly is a 65-ton feeder unit, an assembly of structural steel, and the beginning of an apron feeder. The function of the unit is to distribute and equalize excavation deliveries to the conveyor.

The units of the conveyor proper vary with the ground rise, from 156 feet on a 14-degree slope to 415 feet in length. There are 19 such lengths for the original length of the west side conveyor. A belt for each drops from six to eight feet to the next. An 8-foot idler receives the im- walls between windows. pact.

At the discharge end of the conveyor belt is the Fort Peck type of stacker unit, but because of the immense increase in the amount and weight of material and belting, a swinging boon for a stacker is hardly practicable. Instead an independent boom supported by crawler treads travel in an arc to perform the same function

The main belt is able to carry 2,500 cubic yards per hour or 52,500 yards per 21-hour day. How closely the maximum was reached is shown by the daily peak of 50,700 yards-the upmost of a series of world-breaking records. The May average was 44,800 yards daily-about one ton a second. For the week ending May 23 the total for the week was 329,795.

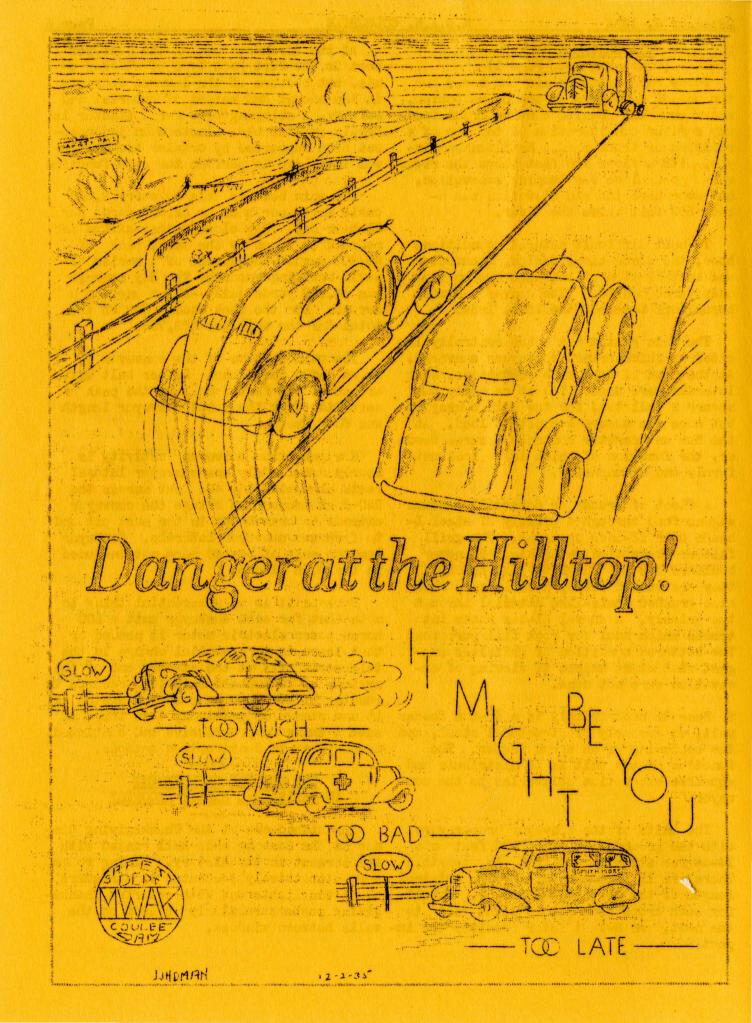
The main section of the conveyor is about 4,684 feet long. Feeder belt units are about 350 feet long. At the peak of west side work the total conveyor length was 6048 feet.

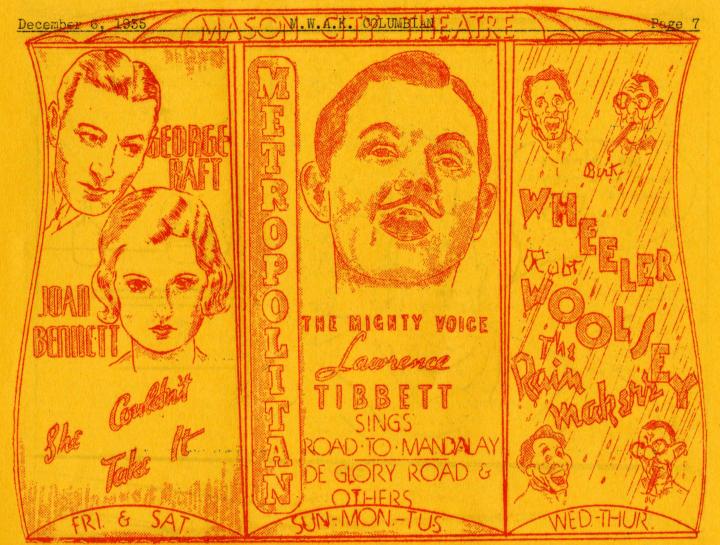
Now west side conveyor activity is nearly done. Only one conveyor lateral rests alongside bay 40. But across the 950-foot excavation bridge the conveyor extends to branch out in the east pit and to form two conveyor laterals. Conveyor lengths east of bay 40 were not included in the 6048 figure.

Perhaps it is an unessential thing to note that for each conveyor unit a 200 horse power electric motor is needed or that there is no essential change in the telescopic tail at the stacker end of the system, or to emphasize world's records in running time. But the conveyor system as it now stands is testimony that there is such a thing as progressive and continued development in construction methods.

WHY NOT TRY IMPROVEMENT IN INDIVIDUAL SAFETY RECORDS? -----

The attendance at the Thanksgiving dinner at the Company mess hall ranked with the largest in its history. Dining rooms were attractively decorated in streamers about the lights and with colorful Thanksgiving posters regularly spaced on the





THE WEEK AT THE THEATRE

SHE COULDN'T TAKE IT, with George Raft and Joan Bennett, Friday and Saturday, one of the good pictures of the year.

Raft, as the ex-gangster, Spot Ricardi, returns to a modification of his roles in "Hush Money." "Quick Millions" and "Scarface." Juan Bennett, from "Private Worlds" plays opposite Raft as the madcap heiress. As executor of an estate, Raft becomes overseer of a money-mad household and gives his best performance since "Scurface." Bil- in the engine cabs, the head-on clash of lie Burke and Wallace Ford are among the supporting cast.

METROPOLITAN, with Lawrence Tibbett, Sunday, Monday, Tuesday.

Tibbett needs no introduction as one of the great singers. His rendering of favor its vocal selections is part of a picture which also has a story.

The singer attaches himself to a wildcat musical company, starring Alice Brady, who controls the purse strings of the company. When Tibbett becomes interested in Virginia Bruce, the purse vanishes.

"Metropolitan." high in critical praise. is personally directed by Darryl F. Zanuck.

THE RAINMAKERS, with Wheeler and Woolsey. Friday and Saturday.

Thrills, suspense, wit and humor make up the Rainmakers." As "scientific" possessors of a wierd rainmaking machine in a drought country, Wheeler and Woolsey blunder into countless situations. With the two two dynamite-laden locomotives have a significance in the climax.

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WHAT GOOD IS AN ALIBI AFTER YOU'RE HURT? ---000--

Here's One for Ripley: The Portland-Oregon game was played at Portland, Oregon. -- from "The Portland Courier"

---000---

The pipe threading machine in use here has from one to four-inch capacity.



WATTS. KILOWATTS AND HEAT

Not much is mysterious about electric heat. Electrical energy is converted to heat as it passes through a heater, but in the use of heat; and a heater there is much that can be remembered to advantage---

ter readings.

(2) Frequent washings use more water and necessarily more heat. Shower baths use far less than tub: baths.

(3) The radiant type of heater costs more to heat your room, for it compares with a fireplace, hot directly in front of the blaze but colder in far corners. The fan type costs less because it blows hot air to all parts of the room at once.

(4) It does not always follow that nightlong use of lights or a heater at full heat is either more comfortable or inex-

pensive.

(5) Hang clothes to be dried not closer than 24 inches from a heater.

(6) Keep heater back to the wall, especially if small children are present, to minindue overturning and consequent damage.

(7) Keep heaters in an upright position. Freak positions might cause damage.

(a) Report, at once, through the nearest telephone, any failure to operate, giving the wattage on the name plate and the possible reason for failure.

(9) Report any defective lighting equipment, burned cords, shocks and other troubles when using equipment.

-1000-

Excavation, gravel plant: 570,000 yards.



- BEGIN WORKMEN'S LIBRARY --

If MWAK workmen are sufficiently interested, definite arrangements for a reading and writing room for bunkhouse menwill soon result in more ambitious work.

(1) Leaky hot water faucets cause high me- at the mess hall is to be set aside for a reading room. Work on the building of benches, desks, cupboards and other necessary equipment will begin immediately. Interested individuals are asked to report to James McGrath or Earl Myers for the little spare-time work necessary. Heating, lighting and necessary lumber and tools will be furnished. Financial contributions by interested individuals assure more comfortable and complete arrangements at a later date if bunkhouse men will co:operate.

> The plan of operation is to turn the reading room over to the bunkhouse men themselves after the beginning is sufficiently under way. The reading room is a Company venture only insofar as it will provide certain needed facilities. Reading material will be partly supplied by the workmen. Sponsors believe a wide variety of material can be on hand.

Women of Mason City began the movement for a reading room several weeks ago. Since then they have canvassed the town for discarded books, magazines and other articles to improve the looks and comfort of a reading room. Many have offered their services in making curtains and cushions for benches and chairs.

THE READING ROOM WILL BE YOURS; WE ASK YOUR COOPERATION ... DONATIONS FROM ANYONE WILL BE APPRECIATED.



CHURCH -

CATHOLIC CHURCH-Father A. Farrelly, pastor Mass will be said Sunday, Dec. 8th, in the American Legion hall, Coulee Center, at 9 a.m. and in St. Benedict's church, Mason City, at 11 a.m. Confessions will be held in Coulee Center from 8:30 until 9 o'clock Sunday morning. Instructions for children will be given Saturday at 10 a.m.

COMMUNITY CHURCH

Services for Sunday, Dec. 8:

9:45 a.m. Sunday School.

11:00 a.m. Morning Worship.

7:00 p.m. Christian Endeavor Society.

8:00 p.m. Evening Song Service.

The Rev. G. B. Baldwin of the extension department of Whitworth college, Spokane, will be in charge of morning and evening services. Accompanying him will be a group of young people from Spokane, a quartet and other musical entertainers. The Young People's Society will hold a re-organization meeting at 4 o'clock, followed by a social hour. The Spokane group will conduct a model organization meeting in the evening as a suggestion for the local organization of young people.

THE FAILURE TO THINK AT THE RIGHT TIME

HAS OFTEN MEANT

MONTHS OF THINKING IN A HOSPITAL BED!!

A Marion three-yard dragline was transported by barge to the east shore pit Sun-

THE SEASON'S HERE

To enable more efficient and prompt Christmas service, the Mason City post office will hold all outgoing cards mailed early until a specified mailing date if senders of cards so desire. With the volume of mail increasing approximately 200 per cent during the holiday season, it is a physical impossibility to handle all mail efficiently and promptly within a few days unless special arrangements are made and the public co:operates. The value of "shop early, mail early" is thereby evident.

Although at least one postal window will be open at all times, the public is advised not to mail parcels from 8:30 to 10:30 a.m. or 2:30 to 3:30 p.m. throughout the holiday season.

Parcels will not be held for mailing, but on the face of each a "Do Not Open Until Christmas" stamp is permissible. No other seals are allowed. When special stamps are used, they should never seal the package unless payment for first-class postage is desired.

Never mail Christmas greeting cards in red, green, or other dark colored envelopes or in very small envelopes.

YOU LIVE YOUR OWN LIFE-SAFELY?

Tailrace riprap and rock filler by Monday::: 170,658 yards.





DAM STARTS UPWARD

While notables from all over the country, officials, workmen and others vitally concerned look on the first official bucket of concrete to form the Grand Coulce dam is poured today from the hands of Governor Clarence D. Martin. A raised platform rests at Block 16G, scene for the first pouring, to be held after 2 p.m., following a party dimmer at the mess hall.

Nearly a thousand invitations have been sent by officials of the Company and by the Columbia Basin Commission, active in ceremonial arrangement.

Block 16G is seven blocks or about 440 feet from the base of the abutment. The letter "G" indicates that the block is in the seventh row from the upstream face of the dam. Pouring of the block to the 885 foot level probably will take about five hours. The electric whirley on the dawnstream trestle will dump the five buckets of concrete from the flatear resting on the trestle. Test pouring of Block 14 G to level 885 is not the official pour.

"DANGER" SHOULD BE THE MOST POWERFUL
WORD IN ANY LANGUAGE!

MOVE ROCK IN BLOCK 40

With all dirt removed from Bay 40, jack-hammers are drilling into bedrock near the 875 level. The two whirleys are dumping excavated rock behind the bay, where a shovel is loading trucks for tailrace and rock fills. A small shovel is now located between block 40 and the cofferdam, handling rock from the block.

BORN AT THE MASON CITY HOSPI

Dec. 4, to Mr. and Mrs. Joseph a, of

Grand Coules, a sen.

First mix of concrete Nov. 28.

EAST SIDE SLIPS

A series of slides that began Nov. 30 on the forebay area of the east side has involved about 30,000 cubic yards of dirt on the southeast slope. The variable condition of the weather probably was a major cause. A dragline is working at the toe of the slide.

The Reserve Officers association will hold an invitational dence in the Government Camp gymnasium on Dec. 14. About 150 couples are expected to attend.

In the clearing at the lumber yard, the corrugated siding for a tool and lumber office for the making of concrete forms is u

The arms of the first of two hammerhead cranes for the upstream concrete-carrying treatle are up.

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Five thousand printed appeals are going put to Grand Coulee towns and Mason City for wedring apparel and other gifts that would make a merry Christmas for needy children. Gifts may be left at the Mason City Fire Department. As a result of the planning by the Associated Clubs, a huge Christmas party will be held at Mead park, Dec. 22, at 3:00 p.m.

PRACTICE GYMNASTICS IN A GYMNASIUM

---NOT ON A SCAFFOLD

---OO---

--000--

By Dec. 1 room for but six more carloads of cement was left in the cement storage silos. This means about 1450 barrels.

In the west side pit shovel No. 10 has been converted to a dragline.

Four concrete forms are now up in row E for later concrete pouring on the west side. Abutment forms are up for both E and G.

