The Big Ditch gives Oliver a chicken(?) for Xmas?
in our geography book was a picture of (English canals? Suez? Panama?)... and while I knew the 00 water project would not be quite like that...
projects contemporaneous with the Valier water project? Panama Canal? Seattle hydraulic-hosing down its hills?
flumed. water (use a Swift Dam?)
the monumental irrigation project to bring water down out of the Rockies onto the Valier prairie
survey party job-names in Valier file folder in bio ph-copies sent by Bill Tidyman
Carey Land Act & other Montana irrigation district info in "water Company" file, in ph'copies sent by Bill Tidyman
Canal crew

salt rings from sweat under arms

"..." crusted in a three-quarter circle where their arms met their shoulders.
Palmer: freight

p. 1--flour, bacon, dried apples, dried peaches, baking powder, coffee, salt
p. 9--Tabor's store: prunes, gum boots, overalls, whisky
p. 18--axle grease for wheel(ed?) scrapers; grease in cases and boxes
p. 32--men's clothing...molasses in barrels, canned salmon and sardines, canned corn, condensed milk, sacks of beans, bacon, flour, coffee
Palmer: food

p. 2—on Missouri R. boat, dried blackberries and apples

p. 5—b'fast: flapjacks, bacon, syrup, dried apples

p. 19—meals in freight (rr) camp: breakfast—
  fresh beef, sometimes just bacon, beans, molasses, potatoes, dried apples,
  coffee and sugar/
  dinner: slumgullion, beef, potatoes, onions, maybe a little piece of bacon or
  pork in a stew, bread, molasses, beans, dried apple sauce, coffee
  supper: bacon instead of beef, potatoes, beans, molasses, dried apple sauce,
  bread, sometimes a good cook would make dried apple pies.

p. 49—hotel meals, 25¢; no ordering—"everything was brought out on the table
  and served family style" (late 1880s)
Palmer: freighting

p. 2--8-10¢/ft freight

p. 3--freight traffic jam in Deadwood in 1877

p. 4--8 mule teams, 2 wagons per 8-mule team, made a mule train; 8 drivers, wagon boss and cook and night herder

p. 7--description of 8-mule outfit

p. 20--pay, dollar a day per span of meals, feed, and $40 a month for driver

p. 22--freighting rr ties cut in double lengths

p. 24--11¢/# to deliver beer

p. 35--bill of lading

p. 39--rr scraper work: 13¢/cu. yd; 40¢ for hardpan; $1.25 for solid rock

--measured yardage by stakes
Palmer: life as freighter

p. 3—took sick with mountain fever; cured himself with sagebrush tea.

pp. 5-6—Chinaman fakes washing their laundry

p. 6—slept in or under freight wagon

p. 8—light: bitch

p. 11—"Your room was on the wagon or under the wagon."

p. 15—hauling rr ties with 6-mule teams

p. 18—leery of his passenger: I told him if he got up in the night to be sure and call me because I got pretty nervous sometimes and did not know what I might do.

p. 20—hauling blasting powder: "holding my brake, letting my wagon down easy over a big rock; it would go down k-chug in spite of the brakes and I would shut my eyes and imagine I was going to go up in the air." Powder in cans, then layers of hay between.

p. 23—pop bottle full of Mexican wine

p. 28—time check issued if a man quit before 1st of month

p. 30—did some plowing so the scrapers could go to work in the morning
Palmer: freighter lingo

6--Can you tie up a pair of lines?
13--Throw your blankets in the wagon and get in. (or: war suxnik sacks)
15--quite a nice little job of mule skinning (difficult task)
30--the elephant corral
Water in the West: Montana saying about water rights legal disputes, "Whiskey's for drinking, water's for fighting."
Dave Walter: Sept. '03 MT trip, telling him abt Whistling Season, he said difference between dryland homesteaders and those from Midwest onto irrigated acres was that 80 such acres looked like, and maybe was, enough for them to make a go of it.
74 British museum
- 90, 000 men, 7000 horses employed in building RR from
  Montreal, began Apr 2, '87; 538 mi.
- Aug 11, '87, complete in Chicago City; 80 men laid 5 mi. 160' trails, "a record no still stands."

use Isaac Ream in Scotch Heaven (+ Monticinos)
Albert Warner, ditch rider
302, S. Michigan, Conrad MT

Bob Eppe
4 N. Maryland, Conrad MT

Pete Walley
V드인 MT

Floyd Stokes
Stockton, CA

phone 278-5853

278-7710
dutch under measures, opposition water
(Golden Fleet, p. 229)
Toussaint as ditch-rider: see irrigating material in Shoestring/livestock & haying file
Albert Warner interview:

—he showed me his irrigating shovel. About 8" across the top, and abt 7" top to point. He had ground down the tapered point to a rounded shape, like a helmet in profile; likely had taken off an inch or more in doing so. The handle is extra heavy, against breaking; shovel stands armpit high on me. He cut notches in handle with a hacksaw (on back of handle, just above the metal) as a guide to whether a full head of water was flowing in a ditch. (He also had a homemade measuring stick, like a big wooden-slat foot-long ruler, which served similar purpose.)
Albert Warner, 302 S. Michigan, Conrad MT-- interview 11 July '82

11--began ditch-riding in 1928, at 24

17--carried shovel or fork or scythe (autumn, for cutting Canadian thistles); carried tool on shoulder or across saddle

29--he carried smaller shovel; "it handled all the dirt I wanted to"

35--also jacket or raincoat tied behind a saddle; "always carry a jacket in Montana"; and lunch

40--ride 25 mi/day

54--fast-walking horse

60--watermaster wd turn water in abt 5 am; W "wd pick it up" abt 8.

68--farmer's head of water 1½'; he had mark on his shovel; needed that much to push water over much field area.

87--paperwork to keep track of acre-feet/day
100--wd see if cattle had fallen into gate and drowned; also, for muskrat and gopher holes. Gophers cd run a hole 100' from ditch. Muskrats bad wherever there were trees.

110--holes plugged by digging into bank, and driving boards in

116--hay irrigation began 20th May; often irrigated whether rainy or not.

132--had to watch farmers for their waste water; if they got to wasting it into neighbor's land, "you might have to jump him." "So they never drowned out their neighbors."

160--W ran dredge, dragline, Cat, on Resvn ditches for some yrs; was at Saville and Fisher Flats on B'feet dam

189--B'feet canal comes out of Badger Creek, goes toward 4 Horns, then toward Fisher Flats. Dam built "just before '40?"

214--a farmer occ'ly would change gate to sneak more water--"all he was doing was cheating his neighbor"--so W tried to keep an extra head in ditches to fill out.
219—surprising amt of water lost to evap'n on hot day; farmer who had full head of water at 10 am, at 4 called W to say "it's just down to nothing." Dropped 3-4" in qtr-mile run.

24:2—"enough Indian" in him not to be bothered by mosquitoes.

24:8—wore mosquito netting over hat, down onto shoulder; mosqtoes worst abt having time. Netting "kind of stifled you"; didn't get as much air thru it.

263—W's feet never sweat, so he cd wear hip boots all day without bother; boots came pocket-high, little loop there fastened to belt; cut on angle along inside of leg

279—excess water or even gophers could cause canal break. Wd watch for puddle of water in field as evidence of break; then get downstream of where he figured the hole was and muddy the water periodically until muddy water showed up in the break puddle. If hole near top of bank, might hear water gurgle, but in bottom of ditch, cd take hr to find.

325—many ditch riders: irrigation dists from Sun R. to Cut Bank Creek
"They dam up almost anything water's running in to kick it out on a piece of ground." Dupuyer Creek ranchers wd pile rocks in creek to divert water to hayfields--evdtly sort of honor system--and fishermen wd get stuck in wet fields, cut brush to put under wheels.

400--water co. manager, whenever a culvert needed changing, wanted to put in smaller one, W a bigger one.

413--never had a year of curtailed water.

437--plugging hole in ditch bottom: half-fill couple of gunny sacks with dirt, jam them in, jump on them and keep tramping. "You'll connive something." Always had 6 or so gunny sacks handy.

450--got wife out of bed in middle of rainy night to fill sacks to bolster wasteway.

464--record sheets for wk of water allotment.

475--farmers wanted ditches full and kept full.
545--outside stairs to Dupuyer dance hall; fairly small inside. Or, wd dance in back of bar.

565--steak b'fast after dancing

582--two-steps and foxtrots. Wild dancing like today's "wd have tipped the bldg over."

600--John Pfeiffer sqre dance caller; wd pat his foot, make arm motions to direct the dancers.
With a good fur coat and woolen clothes...a pleasanter winter cannot be found in the universe. The fact that Montana and mountains are terms synonymous, and as the general idea of a mountain, and especially the Rocky Mountains, is that it is cold and bleak, with six months of blizzards, is the reason for a special chapter upon the subject of Climate.

Our winter begins about the middle of January. Some years it continues for six weeks, but the average length does not exceed three weeks. That Montana occupies such a northerly position and possesses a climate so mild is an anomaly to an Eastern man. over
978.653
N33

Williams, the gem of the project (1979)

- Nelson, Freda

- did not get to

Months Sa
Eva Curr
Boots & Shovels - his of Greenfield Horgan-Diet (Clifford Field has copy for borrowing)

p. 608 - Stanglinson family in 1917 bought Adams ranch land & historic horse barn; later moved it, 1st successfully by team & rollers, then put it up on 2 wagons, put on an evener hitch, & pulled c steam engine
steam tractors

--Eric Ford letter, 2/12/79, p. 6+
End of Track - James H. Kynge

remove of in building in Wyo in 1850-90s;
poetry useful for the Reuse legend

p. 175 - makes a man lie down c hands 6 feet in air
canals dug with 4-horse fresnos

--Eric Ford letter, 3/79, p. 3
573

Tribune-Leader
- Montana Flood, 1964
The Blackfeet Flood

p.3 - Watermasters for B&I/I Design Proj, operated by B&I/I And Agency... checked... canals & cut down heads of rising water.

p.7 - Reid checked headworks at Four Horns leader canal & found Badger C. was rising rapidly.

p.416 - pic of Two Medicine Canal
US Reclamation Br.

Project histories & reports of Rea Br. projects

Roll 5 - Blackfoot (Anda) Proj., Mt., 1910-23

- Many pics & details - very useful.
Gene Bonnet, Montana, summer '85: when the Valier canals were newly built, the water company had his dad run his sheep on the banks to pack them down. Says there is a device called a sheepfoot packer, which does the same.
Clifford Field - 362-5048 - met at Sh'line signing:
father homesteaded in Fairfield water project; he remembers 1st water in
ditch, disappoints not trickle instead of flood.

- call on Dec. 27 to set interview date - aim for late morning

10 a.m. - Dec. 30

15525 Dayton Ave N - in back of Peoples Bank

- parents from?
- crops?
- 1-run school?
- Da'lem yes?
- shopping in 2' field?

- Escalade entry, out of weather
- used overshot stacker or derrick
- backhoe lever to lift fork load
- 1st water in canal, 1919
- main ditch 0.15' across
- 1st, 2nd & 3d French
- shallow basin against erosion
Harvest of Memories (Valier history)

p. 385--Floyd Stokes, ditch rider in '30s: "on horseback, carrying a pitchfork and shovel, with one's lunch. We would cover about 25 to 35 miles per day, turning out the water at the head of the large canal then accompanying it along and turning out the heads to the farmers to irrigate their crops."

--see with Toussaint
Set. Water: irrigating hose for putting water into field.
Mont-Frontier & Premier Life - Valier

p. 4 - had to buy drinking water in 1911; barrel delivered on stoneboat
p. 7 - only 1 tree in Valier in 1917, in yard 7 Mrs. Guenther who 1/2 in wash & watered at c her wash water.
6 - Withrow's variety store
8 - Valley at 1/2 had electricity 9 pm - 11:50 pm
11 - wind & dust: when table was set, plates put bottom side up until ready to eat.
- wind blew her hair net off once.
14 - "In 1909 when Valier started, Dusy started to move to Valier. Our 1st night in town, we sat & watched o 1/2 7 Dusy burn down. In a few yrs Dusy dwindled from abt 1500 to 200."
- (source in Paul Bruner: diaries)
irrigating

hay musket (shovel)

man-made rain

How's it going? Downhill.

possible use of lord of the field in Beth's speech: it appeared in the Gleaner when the project at Valier opened, and Bill Reinking has looked it up for her.

Beth: my son (brief check in her voice shows that it would have been "sons) tells me of capillaries...

Ben English used water as a weaver uses wool.