EXCAVATING ENGINEER



The EXCAVATING ENGINEER

Vol. XXI

OCTOBER 1927

No. 10

The New Line of the Chesapeake & Ohio Railway Co.

Describing the Construction of a New Double Track Line Extending from Valley Crossing to Gregg, Ohio. This Work was Handled by Seven Contractors, Using Over Sixty Shovels for the Excavation

A DIRECT connection between the Hocking Valley Railway and the Chesapeake & Ohio Railway, extending from Gregg, Pike County, to Valley Crossing, Franklin County, Ohio, a distance of sixty-three miles, has just been finished.

The road is double tracked the full length with 100-pound rail. It has three center sidings, each capable of holding 125 cars. It is a low grade line.



Railroad Shovel in a Sticky Clay Cut, Walsh Construction Co.

matching northbound with the Toledo Division of the Hocking Valley which is .2 of one per cent or ten feet grade to the mile northbound or westbound, .5 of one per cent or twenty-six feet grade southbound or eastbound. There are two water stations, but no coaling station.

The cost of this construction amounts to approximately \$13,665,000, or about \$217,000 per mile of double track.

Grade Crossings

With the exception of grade crossing at Duvallall grade crossings are eliminated, both for highways and railroads. There are forty-one highway crossings going over or under, and five railroad crossings that the new line goes over. There are fifty-six bridges, requiring 10,000 tons of structural steel.

Over Fifty Shovels at Work

The excavating required the work of over sixty power shovels, ranging from small to very large, fifty-two locomotives, 407 cars, forty-four concrete units and 2,000 men.

The sixty-three miles were divided into eight sections, with a general contractor in charge of each section. The first actual work was done last November.

The new connection is built under the corporate name of the Chesapeake and Hocking Railway Company. The line for the greater part of its length traverses rich farming territory. In a general way it follows the Valley of the Scioto, lying wholly to the eastward of it. It links up existing lines from the larger cities of the Northwest with the Atlantic Seaboard, and provides valuable additional transportation facility for the territory it traverses, as well as adding substantially to the wealth of the various counties and municipalities through which it passes.

This construction brings into existence a complete railroad from the coal-producing states of Kentucky and West Virginia to the Great Lakes and the north and northwest part of the country. A railroad of low grade, operating as one system, will furnish the opportunity to move coal in solid trains from West Virginia to the Lakes without switching and at fast speed.

It is estimated that the tonnage of coal originating along the Chesapeake & Ohio will in the next five years reach 60,000,000 tons annually, and a large part of this should pass through the Columbus gateway.

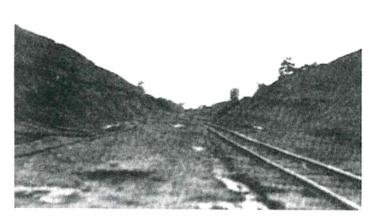
The completion of the new line and its incorporation as an active operating unit will have farreaching effects on the present railway facilities, probably more than can now be visualized. It is quite certain that with the increased tonnage anticipated in the next five years, new yards and other facilities will have to be added at various points.

The development has in it tremendous potentialities for the future of the Hocking Valley.

Driving south from Columbus during the past summer, taking the main highway which follows along the valley of the Scioto River, one was given an exceptional view of big railroad construction. For over sixty miles one could drive along and have a constant view of active construction in every mile of that distance. At frequent intervals one could see the boom of one of the sixty-nine shovels. Across open fields were long trestles rapidly turning into earth fills as the dinky engines pulled their long strings of loaded cars out on them, cars loaded with earth from some nearby point where a shovel was eating a passageway through a hill, or cutting away tons of earth in a borrow pit.

Again, one saw in many places, mixers grinding away, and high hoist towers with long chutes where the concrete was hoisted high and sent grating down into the forms of a bridge where the highway may go under, where another railroad line crosses or where a creek may pass under.

Then, there were the construction camps. Each of the contracting companies had their field



One of the Big Cuts Handled by Walsh Construction Co.

offices, cook shacks, mess houses, living quarters and repair shops. These were all fitted up with every convenience possible.

In many places the highway was taken off the main course and run off on temporary, plankpaved detours where the highway and the new rail line cross, but the highway passes under and the rail passes over on a concrete crossover, for with the exception of the grade crossing previously mentioned, that is, at Duvall, there are no grade crossings on this line.

As one gets down toward the southern end of the line, a beautiful country full of big hills, attractive foliage and winding roadways, heavier digging is encountered. In this part there is considerable rock, and consequently the shovels, cars and all equipment were of the heavier type. Heavier cuts were encountered and the work was much harder.

Well-Known Contractors on Job

Anyone interested in construction and excavation cannot help but feel a slight thrill in a job of this sort. The contractors along the line represented a group of well-known handlers of big railroad construction jobs. Taking the contrac-



Field Office of The Sturm and Dillard Company.

tors in the order of the sections they worked we have the following: Section No. 1, The Fritz-Rumer-Cooke Co.; Section No. 2, Ferguson & Edmondson Co.; Section No. 3, The Sturm and Dillard Co.; Section No. 4, Dominion Construction Co.; Section No. 5, Walsh Construction Co.; Section No. 6, Walsh Construction Co.; Section No. 7, A. Guthrie Co., Inc.; Section No. 8, H. W. Nelson Co.

The entire line was directly in charge of C. A. Whipple, District Engineer, reporting to W. Michel, Chief Engineer, Columbus, Ohio. The territory was divided into eight residencies, identical with contractor's sections. Resident engineers were as follows: Section No. 1, C. E. Butler, Columbus; Section No. 2, C. P. Essman, Ashville; Section No. 3, E. E. Nelson, Circleville; Section No. 5, W. H. Eary, Chillicothe; Section No. 6, T. S. Pattison, Chillicothe; Section No. 7, E. J. Jones, Chillicothe; Section No. 8, E. H. Adams, Waverly.

The digging started at the north with the first section being one of the lighter ones and gradually got heavier. Fills and cuts were heavier and material harder farther on down the line until the last section, where the digging was heaviest.

The material encountered ran practically the same in the entire first seven sections. There was a thin layer of top soil and the rest was clay or clay with a mixture of sand and gravel. The clay is of such a texture that it makes very fine digging but the weather conditions, in way of heavy rainfall, made it mighty sticky and hard to handle in some localities. The last section, however, where the line gets into the hills, contained considerable tough rock digging. The rain also held up the concrete work considerably, but in spite of these handicaps work progressed rapidly.

Section No. 1

The first section, handled by the Fritz-Rumer-Cooke Company, was a most difficult section to handle, first because of the class of material, a very bad class of clay and secondly because of the consistently bad weather conditions.

This part of the work, commencing at Valley Crossing, was seven miles long, extending to a mile south of Lockbourne, Ohio. It was completed in nine months' time, including the laying of rail. This is very good time, and was accomplished under the most trying of conditions, with constant rain, causing the clay to be in a difficult working condition and uncomfortable conditions for the men.

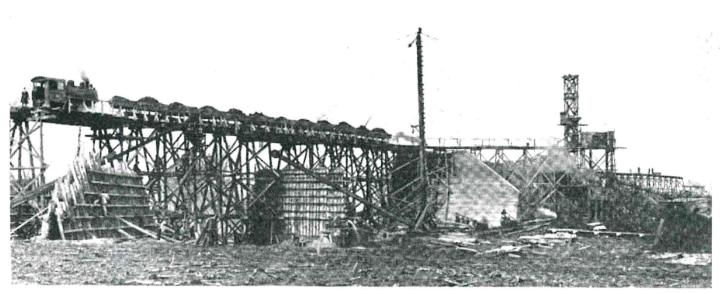
The excavation amounted to about 530,000 cubic yards of material, and about 10,000 cubic yards of masonry, which includes overheads, bridges, etc. There were more than 16,000 lineal feet of concrete and sewer pipe used on this section, besides miscellaneous items. The double-track work consisted of 14 miles of single or 7 miles of double track, consisting of 100-pound rails, fully tie-plated and ballasted with bank run gravel.

The work starts out immediately with two long fills, measuring together some 10,000 feet in length and about ten feet in depth. These required the placing of about 100,000 cubic yards of material. Just a short distance farther on from here was a fill considerably deeper, crossing a little valley made by the Big Walnut Creek. This fill was 2400 feet in length and about 30 feet in depth. requiring the placing of about 122,000 cubic yards of material. All this, of course, meant a great deal of embankment excavation and borrow excavation. There was also considerable highway excavation and surfacing. The rest of the section runs along with numerous smaller cuts and fills, involving considerable borrow excavation and a number of highway changes.

The equipment used by Fritz-Rumer-Cooke Company consisted of five Porter locomotives and forty-five dump cars, 36-inch gauge. Eight and sometimes ten steam shovels, five dirt trains, two locomotive cranes, consisting of one Ohio and one Brown Hoisting, and quite a number of trucks and teams for moving dirt. The concrete machinery consisted of two 1-yard and six ½-yard machines, besides various other smaller plants, consisting of boilers, hoisting engines, pile-driving outfits, tractors and two-wheel scrapers.

Section No. 2

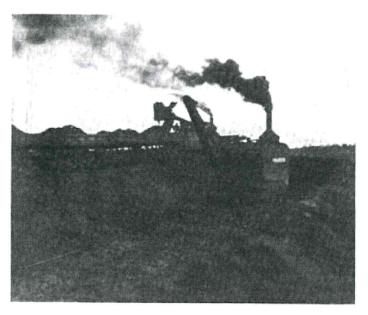
The Ferguson & Edmondson Company on Section No. 2 is a very old concern, and has done a great deal of railroad construction work. They are very highly thought of in this community. The excavation on their section of this work amounted to approximately 405,900 cubic yards. The cuts were not particularly heavy on this section, but the approaches of the overhead crossings they built were quite heavy and entailed considerable work.



Camera and Dill Strade an Cassian Mr.

The character of the material on this section was all clay, which caused some little trouble with the fills sliding. This presence of clay is peculiar, as the sections on either side of them contained a great deal of gravel. Mr. Vanstan, general manager of the company, reports that it rained about eighty per cent of the total time on this work. Such a condition made the clay very difficult to handle, but in spite of this handicap their work was finished on time.

As before mentioned the cuts on this section were not especially heavy, but in spite of this fact there was considerable digging to do. There were a large number of light cuts, and then to make the large fills to the overhead crossings it was necessary to do some borrowing. Due to the nature



Marion-37 Used by The Sturm and Dillard Company.

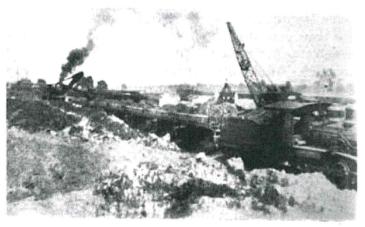
of the section, a great deal of the work was handled by teams. The Ferguson & Edmondson Company maintained two team camps containing about 200 head of stock.

Among the shovel equipment on the job were the following: One Bucyrus 70-C steam shovel, three Erie shovels, two Northwest pull shovels, one Northwest gas clamshell machine, twelve trucks, three Western graders, three Caterpillar tractors, three narrow gauge locomotives (two Porter steam and one Vulcan), thirty-six 4-yard Western cars, three steam cranes (two McMyler and one Ohio), two standard gauge American locomotives.

The concrete work for bridges and crossovers was sublet to the Bates and Rogers Construction Co. This company maintains three mixing units, three Osgood steam cranes, and a narrow gauge outfit for hauling sand and gravel to the work.

Mr. R. J. Vanstan is general manager for the Ferguson & Edmondson Company, O. A. Rogers.

superintendent of team outfit, W. H. Ferguson, superintendent of shovel work, J. M. Morrissey, superintendent of team camp No. 3, Geo. E. Flanagan, pay master and general office man, G. E. Whittaker, Frank J. King and W. A. Flanagan, timekeepers.



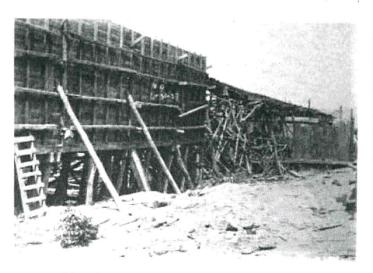
Bucyrus 70-C and Ohio Crane, Section No. 3.

Section No. 3

The Sturm & Dillard Company specializes in railroad contracting, and this job is typical of the fine work done by them. Their section, No. 3, involved the moving of approximately one million yards of material, including cut and borrow excavation and ballast operation, 15,000 yards masonry and a mile or more of deep sewer work.

The grading work on this section was completed to the satisfaction of the engineers in 137 working days, and the track laying (12 miles double track) within the contract time of forty days.

Starting at Station 859, the work enters immediately into fill operations, which, of course, meant considerable borrow excavation. This first fill.



Material Bin at Carr's Run, Section No. 8.

some 8000 feet in length, started in at a depth of about five feet, extended to a depth of about 15 feet in the center, and then came down to five feet again at the end, with the next rise. The first cut of

mixed in. Two Davenport locomotives, one Vulcan and one Porter were used for haulage here, with thirteen cars to a train, consisting of Western and K. & J. four-yard dump cars.

THE COURSE CONTRACT OF CAMP HADE DOME MARTINE

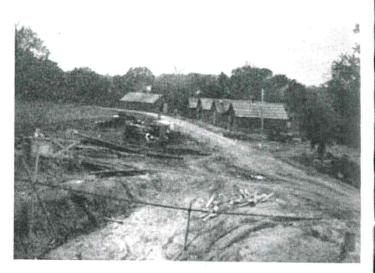
Farther south was another Bucyrus 50-B shovel outfit under the supervision of Frank Mullens, shovel foreman, handling a cut not quite as deep as the one above but somewhat longer. H. Jones and T. J. Thorp were day operator and fireman on this machine, with Wm. Guam and Hugh Griggs as night operator and fireman. Sixyard standard gauge Western cars were used to serve this machine, handled by three Davenport saddle tank locomotives.

These two machines handled a great deal of the excavation on this eight-mile section, setting up some fine digging records, and pushing the work along in great shape.

One of the most interesting parts of this section was a long fill containing a concrete bridge over the Scippo Creek. The channel of the creek was changed here to eliminate two bridges. The fill crossing a little valley, through which the creek runs, is some 3600 feet in length, about thirty feet high and contains some 147,300 cubic yards of earth. The concrete bridge on Station 1395 was handled by R. F. Moffatt and E. Nealon, foreman in charge of the concrete work at this point. E. T. Strothers was in charge of paving roadways. There was considerable cofferdam work here, with an Industrial steam clam pulling out sand and gravel and two American centrifugal pumps taking out the water. Two Smith mixers

of four Smith Mixers were employed on the whole section.

Right at the south end of this fill was Camp



Camp on Section No. 4.

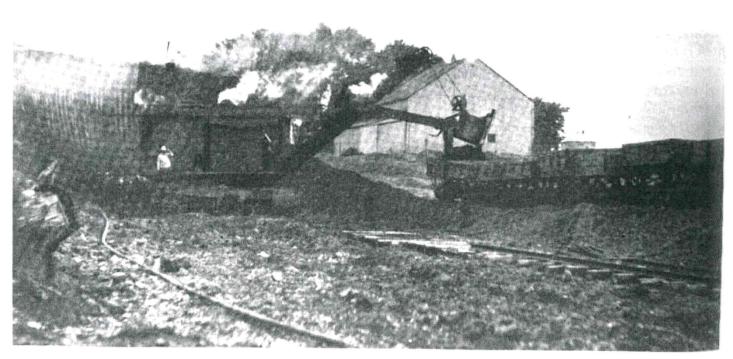
No. 2 on the Dominion Construction Company section.

W. H. Roberts was general superintendent for the Dominion Construction Company, assisted by E. T. Agate.

Sections No. 5 and 6

The Walsh Construction Company who handled Sections No. 5 and 6 maintained their field office not far from Chillicothe.

Sections No. 5 and 6 were approximately ten miles long, involving the moving of about 1,700,000



Bucyrus 13/4-yard Diesel Machine in Clay Cut, Section No. 4.

yards of material, and the placing of about 36,000 yards of concrete. The Walsh Construction Company had at one time twelve steam shovels and draglines on the grading alone, exclusive of cranes and derricks on the concrete work.

Right at the beginning of their first section (No. 5), heavy work was encountered. First there was a long fill involving about 277,300 cubic yards of material, and then a heavy cut involving the excavation of about 246,300 cubic yards of material. This cut was about forty feet deep, maximum, the first twenty-five feet being yellow clay and the rest of blue clay. The cut was about 3600 feet in length, and in parts the material consisted of an intermingling of gravel. Where gravel was encountered it was cemented in such a manner that it offered somewhat difficult digging.

A Bucyrus 50-B steam shovel was put into this cut, going down by benches, working a ten-hour day shift and an eleven-hour night shift. New haulage equipment was put on the job to serve this machine. Three trains of twelve cars each were used, consisting of new 4-yard Western cars and three new Plymouth gasoline locomotives. The material was hauled back to the fill toward the north right at the beginning of Section No. 5.

L. R. Heisler and W. Maybee were on the day shift of this Bucyrus 50-B, and J. Mahanna with A. J. Curtis handled the night shift. The record output during the day shift was 398 four-yard cars in one 10-hour shift. This was in hard digging.

The Walsh sections were replete with a series of quite heavy fills and cuts. Another of their heavy fills was right at the junction of the two sections. Opposite Chillicothe and near their field office was a series of heavy cuts and fills, representing some of the heaviest work in their sections. Right at the end of Section No. 6 was a long cut involving 88,400 cubic yards of excavation and a fill of 67,500 cubic yards.

One of the largest machines used on the entire line was put to work by the Walsh Company. This machine, a Bucyrus Class-24 dragline, was used in some of the heavy work opposite Chillicothe. Two heavy-duty Bucyrus 70-C railroad shovels were used in this vicinity also.

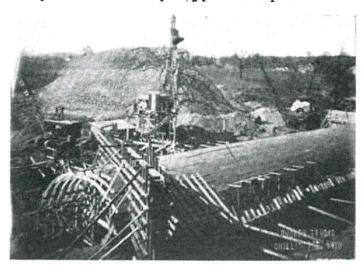
Among other equipment used by the company was a 25-ton crane for concrete work, two Northwest machines, 52 twelve-yard cars and 36 four-yard cars.

The concrete work on Section No. 6, which was approximately 10,000 yards, was sublet to the Bates and Rogers Co. of Chicago, and a portion of the concrete work on Section No. 5, involving about 8,000 yards, was sublet to the Central States Engineering & Construction Co. of Cleveland, Ohio, the remaining 18,000 yards of concrete was placed by the Walsh Construction Company.

There were several subcontracts on the Walsh sections. Yale and Reagan had a subcontract, using a Northwest gas shovel, twenty-four 4-yard cars and three Whitcomb locomotives. W. J. Hayes of Hamilton, Ohio, had two Osgood shovels, seven trucks, a number of 5-yard Western wagons,



a 10-ton Best tractor and one Ford tractor. B. A. Jacobson used a Northwest 1-yard shovel, two graders, twenty wagons, and seventy head of stock. W. H. Knapp of Monroe, Michigan, used two Thew gas shovels, six gas locomotives, twelve 5-yard dump cars and twenty 1½-yard dump cars.



Concrete Culvert and Bridge Work, Section No. 7.

The most interesting part of their work was three overhead crossings, one over the Scioto Valley Railway & Power Company's tracks, the other one over the Norfolk & Western. The grades leading up to these were quite heavy. The fills, of course, were built out on the trestle method.

Section No. 7

Section No. 7 was handled by A. Guthrie and Co., Inc., one of the largest construction organizations in the United States at the present time. Their work here consisted of about 10½ miles of the new line, involving 830,000 cubic yards of excavation and the placing of about 14,200 cubic yards of concrete.

Their section started at the north with a long fill involving approximately 206,000 cubic yards of borrow material and considerable structural steel and concrete work for bridge and highway crossings. The rest of the section was perhaps one of the most level sections on the entire line. There were some long shallow fills and some small cuts. Most of the work was borrow excavation. Toward the end of the section, however, where the line gets down into the hills of southern Ohio, they had a long cut about 2800 feet in length, 25 feet high, involving about 95,000 yards of excavation and half of a long fill, the other half of which extends into the next section. This fill is some 6400 feet long, 30 feet deep, and required about 500,000 yards of material.

Due to the fact that most of Guthrie's work consisted of grading and borrow excavation work, a great many grading outfits were put on the job, and a considerable number of team outfits were

by Guthrie was a team outfit consisting of 88 head of mules, using Western and Stroud wagons. Stroud grading outfits, a Northwest gasoline crane, one Northwest Diesel shovel, a Marion 37. which handled a great deal of the work in the borrow pits, and a Marion 36 excavating foundations, thirty 16-yard K. & J. cars, two Baldwin standard gauge 70-ton locomotives, a 45-ton Industrial crane for pile work and unloading coal. a Jordan spreader, a track shifter and other small or miscellaneous equipment. Welsh and Morgan had a subcontract on this section, putting a Northwest gas shovel on the job, served with Western 4-yard cars pulled by a Plymouth gas locomotive. There were six concrete outfits on the section to take care of the culvert bridge, and crossover work. Smith and Jaeger mixers were used. Some of the concrete work on this section was quite extensive, and proved to be very interesting.

Section No. 8

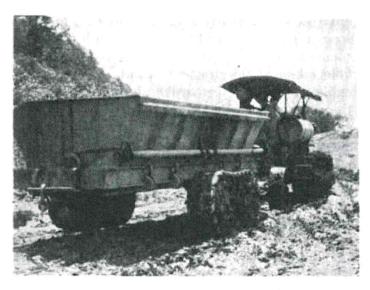
Section No. 8, the last section, represents some of the heaviest digging encountered on the entire line. This section, handled by the H. W. Nelson Company, extends down through the most beautiful part of Ohio where the hill district starts. This, of course, meant some big cuts and big fills. On the other sections the majority of the material consisted of gravel and clay, some of it hard packed, but most of it offering good digging. On Section No. 8, however, besides the top soil, which consisted mostly of clay, deeper stratas put the shovels into heavy gravel, shale and rock. There was even more rock to be handled than the engi-



Osgood Machine Used by Waugh Bros., Subcontractors, Section No. 8.

neers estimated when the line was first outlined and distribution of materials figured.

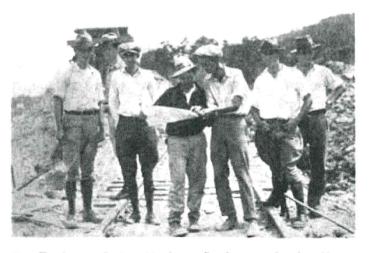
The Nelson Company maintained their offices at Waverly, Ohio, and their section covered the construction of eleven miles of work, beginning approximately a distance of two miles east of



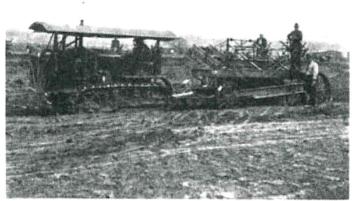
Athey Wagon, Handled by 10-ton Tractor, Section No. 8.



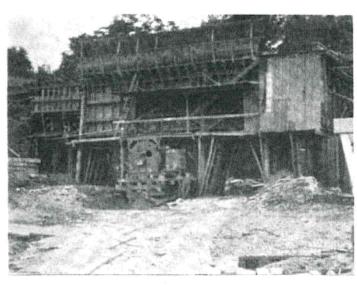
G. R. Stinchcomb, Subcontractor, R. N. Samson, General Superintendent in Car, E. H. Adams, Resident Engineer, Section No. 8.



The Engineers Gather Up for a Conference, Section No. 8.



Stroud Grading Outfit Handled by Best Tractor, Section No. 7.



One-vard Concrete Mixing Plant, Section No. 8.



Bucyrus 100-B Shovel in Some Tough Digging, Section No. 8



Mr. Madigan, Superintendent for the Walsh Construction Company, and Tom Walsh.

known as Gregg's Hill to Salt Creek, near Richmondale, Ohio. The yardage moved here surpasses that moved on any other section, amounting to 1.200,000 cubic yards (over three-quarters rock) and the concrete work amounted to about 25,000 yards. Road changes were quite numerous. Temporary road had to be built to take care of traffic and kept open at all times. One of the important features was the construction of a crossing over the Detroit, Toledo and Ironton Railroad.

There were eleven large cuts on Section No. 8

and ten large fills. This is, of course, counting only those of a really maximum in size, for there were numerous smaller cuts and fills. To give some idea of the material encountered here, a test hole taken at the first cut, a cut of some 31,200 cubic yards, 1400 feet in length and 20 feet deep, the analysis showed from top to bottom, 5 feet clay, 1 foot rock, 4 feet clay, 2 feet rock, 3 feet clay, 2 feet rock, 3 feet clay, 2 feet slate. Such a mixture as this means some good hard digging, and, of course, blasting was necessary in many of the cuts. The next three cuts measured, consecutively, 1200 feet long, 25 feet deep, excavation 37,000 yards; 1600 feet long, 25 feet deep, excavation 52,400 yards; 1200 feet long, 30 feet deep. excavation 50,900 yards; 2800 feet long, 25 feet deep, excavation 103,000 yards. This last cut starting at Station 2980 was the largest cut on the section. The largest fill on the section started at Station 2920, measuring 5200 feet in length, 25 feet deep and involving the placing of 217,400 cubic yards of material.

Two Bucyrus 3-yard machines were put on the job to handle the heaviest rock cuts. The best record made by these machines was 608 five-yard cars of solid rock in a 10-hour shift for one machine, and 155 twelve-yard cars solid rock for the other machine. One of the Bucyrus 50-B Diesels



Carr's Run Camp, Section No. 8.

handling rock made 451 five-yard cars in a 10-hour shift.

The Nelson organization had by all means a most complete outlay of equipment on the job to handle the work, as is seen by the following list:



C. B. Randall, Concrete Foreman for the Walsh Construction Company.

Two new 100-B Bucyrus shovels, three Bucyrus 50-B Diesel shovels, one Erie 34-yard crane, one Erie 34-yard shovel, one Insley excavator, nine Whitcomb 12-ton locomotives, four Milwaukee 10-ton locomotives, one Plymouth 8locomotive, ton 116 5-cubic-yard Western wheeled dump cars, three standard gauge steam locomotives, thirty 12-cubic-yard Western dump cars,

one 10-ton Caterpillar tractor, one 5-ton Caterpillar tractor, two 7-cubic-yard Athey wagons, one Northwest dragline, three Cyclone well drills, one Loomis Machine Co. well drill, three Western spreaders, one Jordan spreader.

Besides all the above listed equipment there were five subcontractors on this section, with their equipment as listed below: Waugh Bros., Inc., two shovels and standard gauge outfit, Langhorne and Langhorne, shovel and standard gauge outfit, G. R. Stinchcomb, shovel and truck outfit, J. M. Bernhardt Construction Co., shovel and truck outfit, Universal Construction Co., concrete.

The Nelson Company was one of the first to start laying steel on the line, and by the middle of July they had their section 95 per cent complete.

Mr. H. W. Nelson is president of the Nelson organization, Mr. R. N. Samson was general superintendent in charge of this work. The office established at Waverly, Ohio, was in charge of Mr. Sisk, assisted by Mr. Robert Jones and Mr. Robert Whitehead. The clerical force further consisted of five timekeepers in the field.

The forepart of this article is through the courtesy of the Chesapeake & Ohio and Hocking Valley Employees' Magazine.

California Away on Big Road Program

California is launched on the greatest road development era in its history. Ultimate completion of the premier motoring State's splendid highway system is now a certainty. The Breed highway bills, enacting a twelve-year program of financing and construction, are now law.

These two companion measures, providing an additional one-cent gasoline tax for new highway construction and for the equitable allocation of highway funds for the benefit of the entire State, became effective Friday, July 29. They represent the legislation solution of the problem involved in the big roadbuilding job ahead of the State to provide for the needs of approximately 1,650,000 California motorists and hundreds of thousands of motor tourists who visit this state annually.

The new program will result, within a reasonable time, in a State highway system that will adequately serve traffic, so far as it can be anticipated for at least the next decade. It has been pointed out that the one-cent additional gasoline tax is estimated to raise approximately \$123,000,000 during the 12-year period. The ultimate end the additional funds make possible are as follows:

- 1. Three paved highway connections with Oregon.
- The building of eight connecting links with Nevada, at least two of which will be paved to a high standard.
- 3. The paving of three main highways to the Arizona line.

- The complete improvement, both north and south and east and west across California of every transcontinental or interstate highway reaching its borders.
- 5. The paving of two main trunk line highways for the full length of the state.
- 6. The connecting up by a paved highway of every one of the 58 county seats to one or the other of these main trunk lines.
- 7. The improvement of twelve distinct transstate highways that will afford ample facility in traveling from the coast line highway to that of the valley and vice versa. Four of these are in the primary system.

The work will be started at once as a quarterly auditing of its funds received will make the first money immediately available.

- Western Highways Builder.

A Dead Game Sport

Conductor: "Change for Marietta! Change for Marietta!"

Country Passenger: "Don't know who the girl is, but I'll chip in a dime." — Union Pacific Magazine.

Loyalty

Little Jewish Boy (to Grocer): I want a pound of animal crackers without the pigs.

His Real Need

Boss: "No, sir; we cannot grant you a raise in salary at this time."

Employee: "But, Mr. Brown, my wife has adopted a budget." — The Argonaut.