

THE MINING OPERATIONS
OF CALIFORNIA
AND VICINITY

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W. WAYNE HANCOCK

1902.

One of the foremost districts in the world of industry is the valley of the Monongahela. Its iron and steel mills are noted the world throughout. The chief cause of this importance is its richness in coal deposits. This valley is in the center of the great bituminous district of Pennsylvania. This productiveness is the source of great wealth and improvement in the valley. There are nine dams which divide the river into nine "pools".

Although all of these are rich in the production of coal, the richest is the fourth pool. In this pool there are more mines and the coal is handier

to the surface than in the other mines. The banks of the river in the fourth pool are lined with small mining towns and numerous tipples. One of the largest of these towns is California. California is a town of about 2500 inhabitants, situated along the left bank of the river about fifty miles from Pittsburgh and ten miles from Rock No. 4. It is in the center of the mining district and the chief occupation is mining. There are five mines in the vicinity of California, four of which belong to the Monongahela Consolidated Coal^{and} Coke Company and one to Jones and Laughlin.

1. The "Vigilant" is in the upper part of town. 2. "Stony Hill" is almost directly opposite the Vigilant. 3. "Chamouni" is also on the right bank, about one-fourth mile above Stony Hill. 4. The "Crescent" is on the left bank a little above Chamouni. 5. The mine belonging to Jones and Laughlin is about $\frac{1}{4}$ mile above the river on Pike Run.

About 1870 a mine was opened a few hundred feet below the present site of Stony Hill and directly opposite the town. It was called "Cedar Hill". It has been out of use for about 5 years and now scarcely any traces are left. The next mine to open was Stony



STORMY HILL.

Hill in 1878; it is still running.



VIGILANT.

The Crescent
opened in
1891 and
Chamouni
in the next

year. At the four mines belonging
to the River Combine there are about

800 men employed. They put out about 115,000 bu. per day, which is worth about \$6900. Altogether about 68 mules are used. In the Crescent and Vigilant, machines, worked by 2 men, are used; they can dig about as much as 20 men. Chamouni and Stony Hill are worked by men. The mine of Jones and Laughlin's is probably about 20 years old. The old tipples ran across the hollow one Pike Run and tunneled under the hill above Coal Centre. A new tibble is being built down Pike run to the river. Of these mines Chamouni is the most productive. Chamouni employs 400 men of whom 25 are

drivers and 21 work outside. About 150 of these men live in shanties at Chamouni. Chamouni has two



MINERS' HOUSES AT CHAMOUNI.

mouths and two main entries, one for going in, and the other for coming out. These branch out into "blind" entries and side entries, etc.

Between the side entries and the main entry are the rooms where the miners

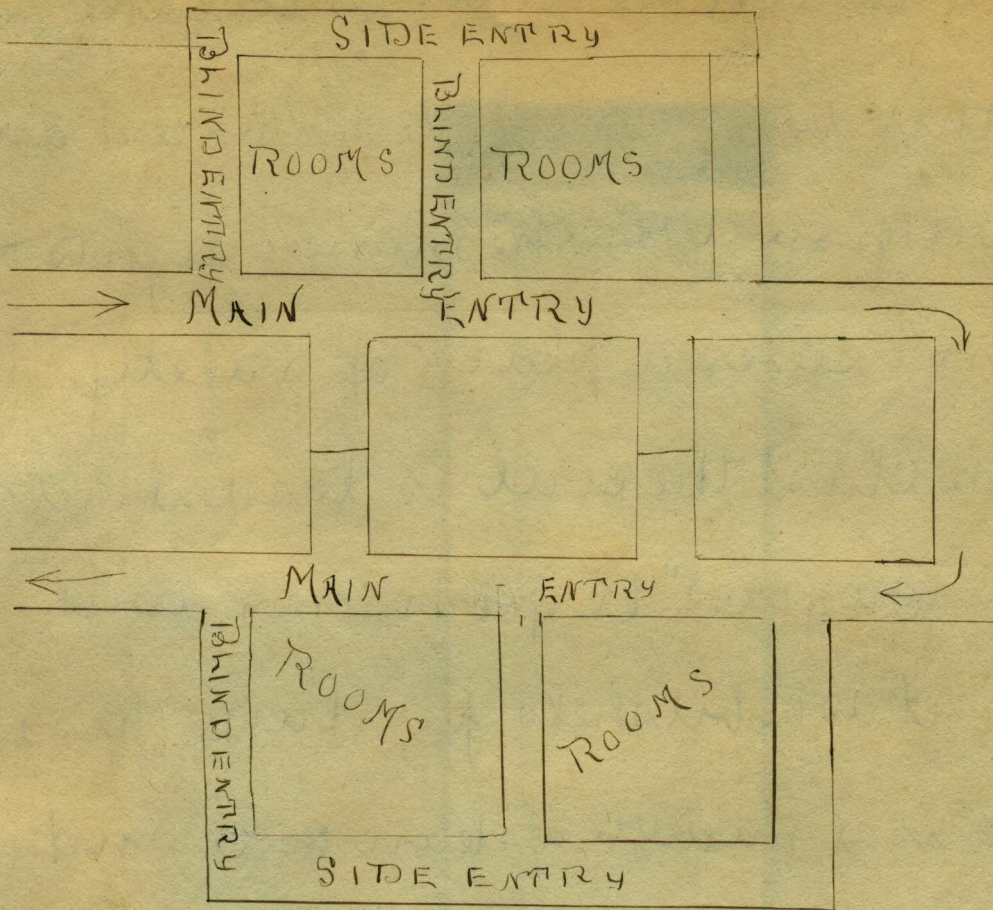


DIAGRAM OF SIMPLE MINE.

work. In Chamouni at the present time, it is about 5000 feet, or nearly one mile from the mouth to the rooms now being worked.

The miner on first going into the mine examines to see whether it is safe to work. He then under mines

the coal which he wishes to take out.

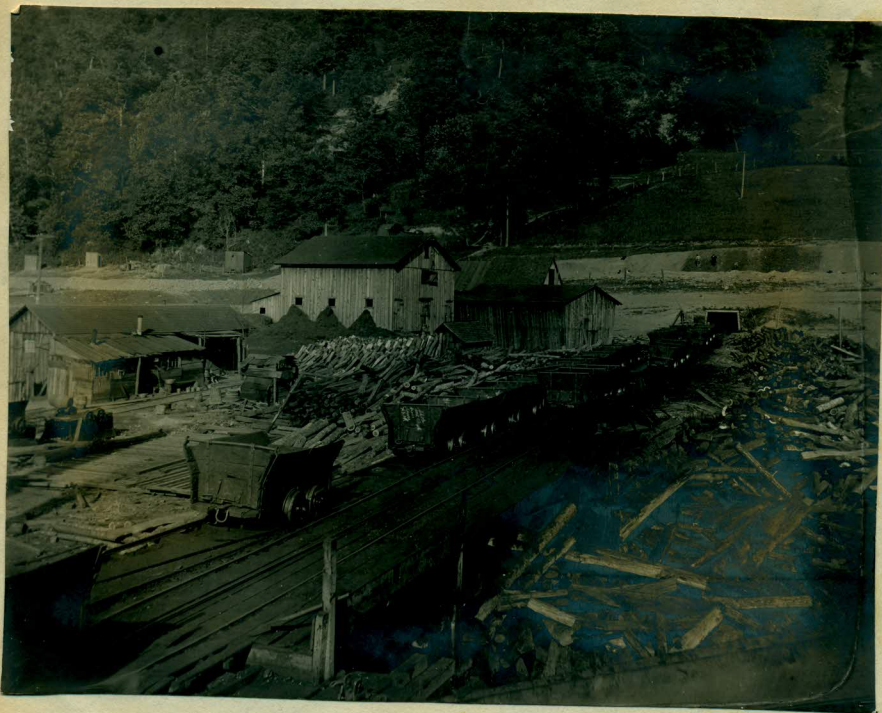
After this is done a hole is bored and filled with powder. The miner lights the fuse and seeks a place of safety.

After the blast the coal is loaded into cars or "wagons." A good miner will dig about 200 bushels per day. This 200 bushels is a mixture of clean coal and slack which is called the "mine run." The cars or wagons, hold about 50 bushels and in one day a miner will fill about four of them. At Chamouni about 450 wagons are in use. After the coal is cleared up posts have to be put in to prop up the roof. One miner will use about 2 posts in one day. When

A mine is abandoned these posts are pulled out and the coal pillars, etc, are taken. After the coal is loaded in the cars it is hauled with mules to the main entry where it is hooked to the line. The hauling used at Chamouni is the "endless wire system." It is an endless wire cable which reaches from the engine down through the empty slope along the main entry, back the other main entry, and out the other mouth to the engine again.

It is worked by a powerful engine. When the loaded cars are brought to the main entry they are clamped to the cable which is always in

motion. These loaded cars are unclamped at the tippel and emptied; they are then shifted to the empty slope and again clamped to the moving cable and hauled down into the pit.

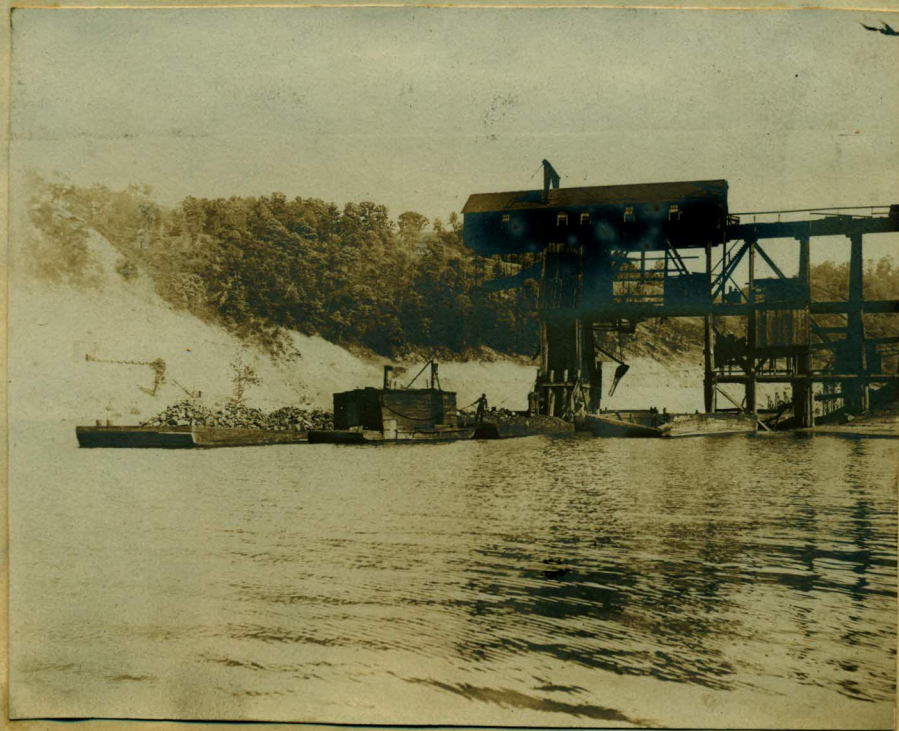


ONE OF THE MOUTHS AT CHAMOUNTI.

The system used at the Vigilant is the "dilly" system. When the mine has only one mouth the cable has to bring the loaded cars

out and reverse to take the empties back. The endless line system saves time and trouble. With the "dilly" the cars are brought out in "trips" and only one trip can be on the track at one time and the cars cannot come out until a trip is ready.

When the coal is hauled out of the pit it is weighed on the tippie and then dumped into boats on the river.



The Crescent and Vigilant can also dump into railroad cars; but as on the right bank there is as yet no completed railroad, the river only can be used to carry the coal.



COAL TIPPLE
AT
THE VIGILANT.

The coal from the tipples is dumped into 3 kinds of freight boats. A flat holds from 3500 bu. to 7000 bu.; A barge

holds from 12000 bu. to 14000 bu.; and a coal-boat holds from 18000 bu. to 24,000 bu. The work of loading the boats can be done pretty fast.

Sometimes 4 are emptied per minute on an average. These boats when loaded are towed down the river to Pittsburgh and the cities on the Ohio and Mississippi Rivers. A boat will take as an ordinary load about 7 or 8 flats or 50,000 bu.

The production of coal at Chamouni is about 50,000 bu. per day, "mine run", and at 6¢ per bu. amounts to \$3000 per day, while the expense of getting it out is about

3¼¢ per bu. The miner gets \$2.65 per
hundred bushels for digging and the
hauling costs the difference.



Pedagogy

The study of mining in itself is very interesting to children. Few are they who have not been in old coal-mines or even active ones and have not "stories" to tell about them.

In a town like California the children being so close to the mines soon learn something about them which can be developed into better knowledge. The children can see nearly everything for themselves and can get material from their parents. Mining could be taught first in the third grade. The study of mining also makes a basis for

geology, arithmetic, commerce, and English. The geological structure may be taught by showing a hillside where the strata crop out. The commerce can be taught greatly through the shipping of coal by rail and river.

The pupils can be taught the commercial cities, chief industries, etc., from mining.

The compositions and oral narrations will give fine opportunities for the development of English work.

— Finis —

