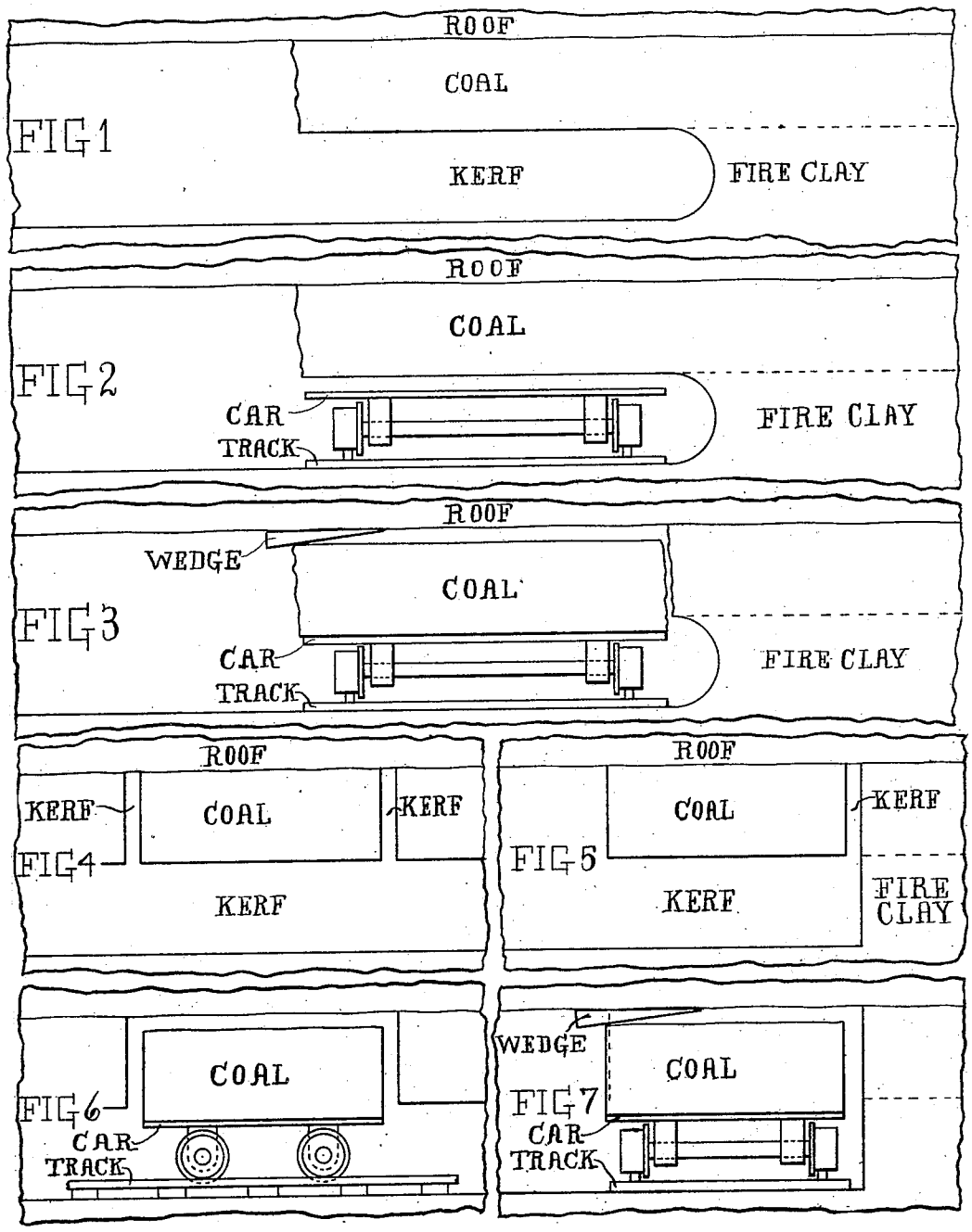
No. 677,880. Patented July 9, 1901.

E. C. MORGAN.

PROCESS OF MINING COAL.

(Application filed June 14, 1899.)

(No Model.)



WITNESSES:

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PROCESS OF MINING COAL.

SPECIFICATION forming part of Letters Patent No. 677,880, dated July 9, 1901.

Application filed June 14, 1899. Serial No. 720,463. (No model.)

To all whom it may concern:

Be it known that I, EDMUND C. MORGAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Process of Mining Coal, of which the following is a specification.

My invention relates to an improved process of mining coal; and the objects of the invention are, first, to reduce the cost of mining coal, particularly in thin veins; second, to reduce the amount of laborious handwork now required in loading the coal on cars for transportation out of the mine, and, third, to produce the coal in a better marketable condition and with less waste. I attain these objects by the process illustrated in the accompanying drawings, in which—

Figure 1 shows the first step, Fig. 2 shows the second step, and Fig. 3 shows the third step, in the process. Figs. 4, 5, 6, and 7 show an additional operation which may be employed in connection with the process shown in Figs. 1, 2, and 3.

In the present methods of mining the coal is undercut by hand or machine and broken down onto the floor of the mine or blasted out of the solid onto the floor of the mine and loaded by hand on cars for transportation out of the mine.

My process shown in Figs. 1, 2, and 3 consists in forming a kerf under the coal by hand or with a machine, laying a track in the kerf, and running a movable platform or car suitable for transporting the coal out of the mine into the kerf and letting the coal down directly into said movable platform or car, thus eliminating the greater part of the handwork now required in loading the coal.

As the nature of coal varies much in different mines and sometimes even in the same mine, it is necessary to vary the operation somewhat after the kerf has been formed. In some cases the coal will stay in its position until the car has been run under it, after which I loosen it by wedges or other suitable means and let it down into the car. In other cases, where the coal is not sufficiently firm to stay up until the car has been run under it, I hold it up by suitable and well-known supports until the car has been run under it. I then remove the supports and let the coal down into the car.

The track may be dispensed with, if desired, without departing from the spirit of my invention.

In practice, in addition to the process shown in Figs. 1, 2, and 3, I prefer to employ the operation shown in Figs. 4, 5, 6, and 7, which consists in blocking out in the coal-vein a suitable amount of coal to fill one car by cutting vertical kerfs in addition to the horizontal kerf under the coal.

As in practice the kerf under the coal required for my process is much larger than that employed in the present method of mining, the utility of my invention will be more fully realized when the kerf is formed by machinery.

While machinery is now used to a considerable extent in coal-mines for forming small kerfs and drilling blast-holes, the loading of the coal is done by hand.

By the use of my process I so change the method of mining that the coal practically loads itself. At the same time I am enabled to use machinery to advantage for the other operations.

Having explained the nature and scope of my invention, so that those skilled in the art may be enabled to use the same, what I claim as new and of my own invention, and desire to secure by Letters Patent, is—

1. The process of mining coal, consisting in forming a kerf under the coal, running a movable platform or car into said kerf, loosening the coal and letting it down directly into said movable platform or car.

2. The process of mining coal, consisting in forming a kerf under the coal, laying a track in said kerf, running a movable platform or car into said kerf, on said track, loosening the coal and letting it down directly into said movable platform or car.

3. The process of mining coal, consisting in blocking out in the coal-vein, a sufficient amount of coal to fill a car, by forming horizontal and vertical kerfs, then running a movable platform or car under said blocked-out coal, loosening it and letting it down directly into said movable platform or car.

EDMUND C. MORGAN.

Witnesses:
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