(No Model.)

S. CRAIG.

EXCAVATING MACHINERY.

No. 262,535. Patented Aug. 8, 1882.

Fig. 1.

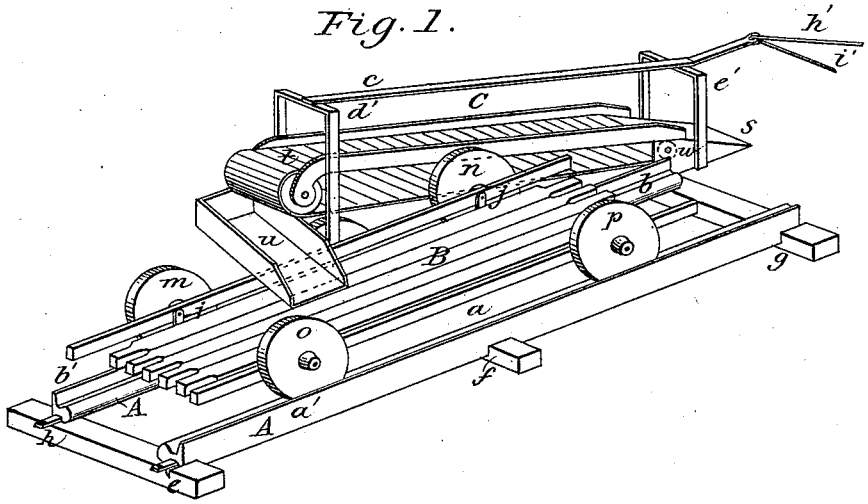


Fig. 2.

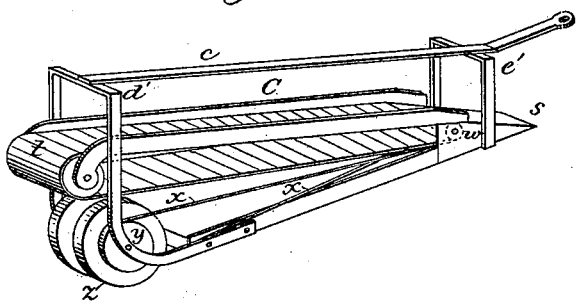
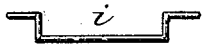


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL CRAIG, OF NORTH BENTON, OHIO.

EXCAVATING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 262,535, dated August 8, 1882.

Application filed April 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL CRAIG, a citizen of the United States, residing at North Benton, in the county of Mahoning and State of Ohio, have invented new and useful Improvements in Excavating Machinery, of which the following is a specification.

My invention is composed of three separate devices, which are combined as follows: The track A, constructed as hereinafter described, and the car B are combined for the purpose of transporting, and the track A, the car B, and the excavator C are combined for the purpose of excavating and transporting earth in the construction of railways and for purposes of a similar nature. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the track A, the car B, and the excavating device B, combined and arranged in order for use. Fig. 2 is a perspective view of the excavating device, showing it separately from the other devices. Fig. 3 is a view of the axle *i*.

Similar letters refer to similar parts throughout the several views.

In reference to the track, it is constructed in the following manner: *a* and *b* are rails, which, instead of being laid on the wide parts or bases *a'* and *b'* of the said rails, are laid on their sides, as shown in Fig. 1, and the wheels of the car B, which should be constructed without the flanges, run in the depressed portion of the said rails instead of running on the elevated portion, as the ordinary railroad-car does. The lower extension of the parts *a'* and *b'* are let into the ties by means of the depressions which are cut into the said ties at *e f g h*, the said depressions being of a depth to bring the oval portion of the rail on a level with the upper part of the ties. The said rails are fastened to the ties by having spikes driven through holes in the central or depressed portion of the rail. When the joints are formed the ordinary fish-bar is used; but instead of being fastened with bolts they are fastened by having spikes driven through them, and instead of having a bar on each side of the rail at the joints only one bar is used, which is fastened on the under side.

With reference to the car B, it is constructed in the following manner: The axles *i* and *j* are bent, as shown in Fig. 3, the portion between the two upright angles being used to sustain the bottom pieces of the car and the end portions being the spindles for holding the wheels *m n o p*. The said wheels *m n o p* may be constructed on the plan of the wheels of an ordinary wagon, with hubs which turn on the said spindles. The bottom of the car is composed of loose movable pieces, which can be lifted out of their places in order to allow the earth to drop through when the operator desires to deposit it.

The excavating device C is constructed and operated in the following manner: *s* is a point which is formed with a cutting-edge placed at the front end of the machine. *t* is a carrier, on the front end of which the earth is deposited, (when the point *s* is drawn through the earth which is to be removed,) and which conveys the earth back to the chute *u*. The said carrier at the upper end passes around the roller *v*, and at the lower end around the roller which is indicated by the dotted lines *w*. The said carrier is driven by means of the belt *x*, which passes around the pulley *y*, which pulley is firmly connected with the wheel *z* at the rear end of the machine, and around the end of the roller *w* in a groove located at the outer end of said roller *w* at the front end of the machine. *u* is a chute on which the earth is deposited from the carrier *t*, and which, being elevated at the outer end, conveys the earth from the upper end of the carrier to the car B. *c* is a bar which is connected with the parts *d'* *e'*, the front end of which extends beyond the part *e'*, and is provided with an orifice for receiving the attachment by which the said excavator is moved. *h'* and *i'* are rods by which the said excavator is attached to the car in front of the one which is being loaded, thus bringing the rear end of said excavator about the middle of the car which is being loaded.

The operation of my invention may be described as follows: The car B, being placed upon the track A, (which is constructed as described,) the excavator C is placed by its side in such position that the rear end of the carrier of said excavator stands about midway between the wheels of said car. The chute *u*

being placed in the position shown in the drawings, and the rods *h'* and *i'* being connected with the car in front, as the said cars move forward the point *s* is driven into the earth, and as it moves through the earth the portion of earth above the said point is deposited upon the carrier at its lower end, when it is carried back by the said carrier and dropped upon the chute *u*, which conveys it to the car B, by which it is conveyed to the place of deposit.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The track A, constructed as described, in combination with the car B, constructed as described, for the purpose set forth.

2. The combination of the track A, the car B, and the excavator C, each and all constructed as described, for the purpose set forth.

SAMUEL CRAIG.

Witnesses:
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