To all whom it may concern:

Be it known that I, HENRY H. GEORGE, JR., of Richmond, Virginia, have invented certain new and useful Improvements in Car-Placing Attachments for Power-Excavators, of which the following is a specification.

In excavating-work in which a power-excavator is used it is customary to use a locomotive to place or "spot" the cars into which the excavated material is dumped. This requires, in addition to the locomotive, an engineer and a fireman, and it renders the operation of placing the cars quite expensive.

The present invention relates to an attachment to the excavator by means of which the cars may be spotted without the use of a locomotive. The attachment comprises an additional engine, which is supported upon a bracket at the side of the car and provided with a winding-drum and a rope connected with said drum, which may be connected to the cars in various ways to move them.

The invention will be described in detail in connection with the accompanying drawing, which shows the projecting machine provided with the present improvement and a series of cars to be loaded.

Referring to the drawing, A indicates an excavating-machine of any ordinary form, having a power-operated boom or crane B, carrying an excavating dipper or bucket C.

The excavator A is mounted on a platform D which is provided with the usual ear-trucks for running on a track E or with suitable traction-wheels. It is usually provided with a housing for the machinery similar to a car-body; but such housing has been omitted in the accompanying illustration for clearness.

Adjacent to the excavator are one or more tracks F, which are usually of narrow gage and on which the dump-cars G travel. These cars are successively loaded by the shovel H and they must be placed successively under the dumping-place of the shovel for this purpose. This placing or spotting has heretofore been effected by the use of a locomotive, which must be constantly in attendance, as the cars are rapidly filled.

In carrying out my invention I provide the excavator with a laterally-projecting bracket or support J, or with two such supports on opposite sides of the car. As shown, there are two supports, one being in a operative position, while the other is shown in its inoperative or vertical position in full lines and in the horizontal position in dotted lines. These supports are hinged to the car-platform, and when out of operation they form part of the sides of the car and are practically doors to close openings in the sides of the car.

I provide the car-platform with transverse rails or supports K, upon which the spotting-engine L rests, as shown in dotted lines. These rails may be stationary on the car; but I prefer to have them movable longitudinally and to shift them partially onto the bracket to assist in supporting the spotting-engine when the latter is in use, as shown in the drawing.

When thus used, the inner ends of the rails K are suitably secured to the platform or car-timbers, and they form auxiliary brackets. This engine may be moved along or with the guides or rails K and onto either of the extensions or brackets L. When located on one of said brackets, it is suitably bolted or connected thereto, and the bracket is preferably braced by diagonal horizontal braces M, connecting it with the car-platform, and upright braces N, connecting it with the top of the car-body. It is also, preferably, supported by one or more props or jacks arranged beneath.

In other words, the bracket K is to be suitably braced when in use to withstand the strains put upon it, and the engine L is to be suitably connected with the bracket. The engine L turns a winding-drum O, which carries a rope P.

Means are provided for attaching the rope P to any one of the dump-cars K. The spotting-engine, as shown, is supplied with steam through a flexible steam-hose Q from a boiler R, which supplies power for the shovel. Any other motive power—such as compressed air, hydrocarbon, or electricity—may obviously be used for both the excavator and the spotting-engine.

My invention may be operated by connecting the rope P to the rear car of the train of
cars, and the engine is then operated intermittently to spot the several cars under the dumping place of the shovel. When the rear car comes abreast or nearly abreast of the spotting-engine, the rope 12 may be disconnected from the car and then passed around the pulley-block 15, which is suitably anchored, and again connected to the car. This will enable the engineer to spot the last cars in the train. The rope may be passed through the pulley-block in the first instance and all the cars thus spotted without making any change. By locating pulley-blocks, such as 15, at different points any desired movement of the dump-cars can be effected by means of the spotting-engine. For instance, by means of a suitably-placed block the dump-cars when loaded may be drawn onto a siding, from which they may be taken by a locomotive. As heretofore stated, when the spotting-engine is not in use or when it is desired to transport the excavator the spotting-engine is moved into the housing of the excavator and the brackets 6 are folded up to form parts of the sides of said housing.

In some instances the spotting-engine might be immovably connected with the supporting-platform of the excavator. It is to be noted that the spotting-engine is entirely independent of the other machinery of the excavator and is used solely for the purposes described. In other words, it is an addition or attachment to the excavator now in common use, its object being to supplant the usual shifting-locomotive by a less expensive stationary engine.

By the use of this invention the expense of excavating is very much reduced, the spotting-engine being much cheaper than a locomotive and requiring but one man to operate it. As it forms a permanent part of the excavator, it may be transported from place to place without additional cost, whereas the expense of transporting a narrow-gage locomotive is considerable.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a power-excavator and its sustaining-car, of a bracket extending laterally from the side of the car, and a spotting-engine removably supported on said bracket, said car being adapted to receive the engine when removed from the bracket.

2. The combination with a power-excavator and its sustaining-car, of an engine support or bracket hinged to the side of the car and adapted to be folded into vertical position when not in use, and a spotting-engine adapted to be supported on said bracket.

3. The combination with a power-excavator and its sustaining-car, of a bracket or support extending laterally from the side of the car, braces connecting said support with the car body, and a spotting-engine normally located on the car and movable on the said bracket, for the purpose set forth.

4. The combination with an excavator and its sustaining-car, of a support or bracket extending laterally from said car, a track for dump-cars adjacent to said bracket, a pulley-block anchored adjacent to said track, a spotting-engine supported by said bracket, and a rope connected with said engine and adapted to be passed through said pulley-block and connected to said dump-cars.

5. The combination with an excavator and its sustaining-car, of transverse guides or rails on said car, a bracket extending laterally from the car and a spotting-engine supported on said guides or rails and movable thereon to said bracket, for the purpose set forth.

6. The combination with an excavator, and its sustaining-car, of transverse guides or rails movably mounted on said car, a bracket extending laterally from the car and a spotting-engine supported on said guides or rails and movable thereon to said bracket, said rails being also partially movable onto said bracket to form an additional support for said engine, for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY H. GEORGE, Jr.

Witnesses:

JAMES A. WATSON,
THOMAS DURANT.