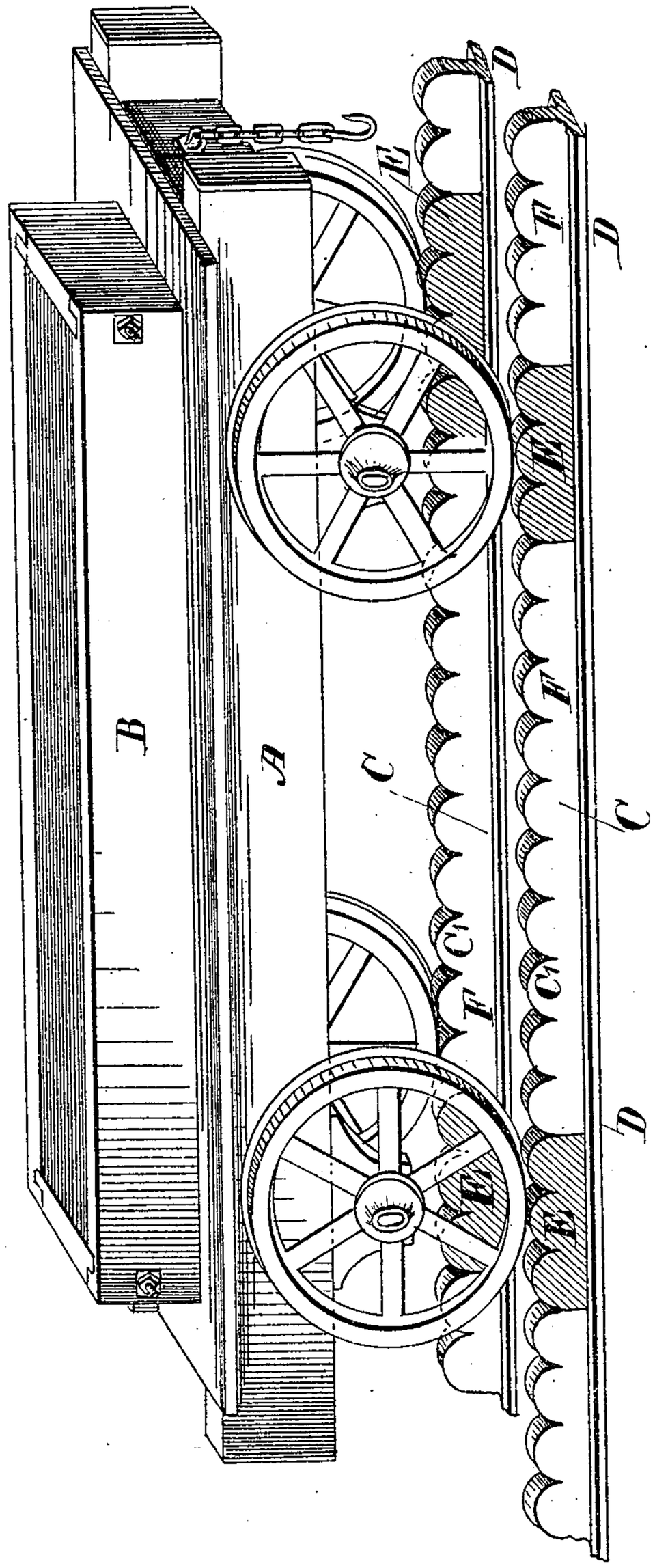
(No Model.)

H. REID.

JOGGING APPARATUS FOR CONCRETE AND THE LIKE.

No. 273,606. Patented Mar. 6, 1883.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY REID, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

JOGGING APPARATUS FOR CONCRETE AND THE LIKE.

SPECIFICATION forming part of Letters Patent No. 273,606, dated March 6, 1883.

Application filed October 12, 1882. (No model.) Patented in England January 6, 1882, No. 77.

To all whom it may concern:

Be it known that I, HENRY REID, civil engineer, of London, in the county of Middlesex, England, have invented new and useful Improvements in Jogging Apparatus for Concrete and the Like, (for which I have obtained a patent in Great Britain, No. 77, bearing date 6th January, 1882,) of which the following is a specification.

The object of this invention is to obtain sound and reliable concrete form at a less cost than that incurred by the present methods. Impact concrete has many advantages over that usually made by hand, because to do it successfully a minimum quantity of water must be used, thus securing a dense mass free in a great measure from the objectionable porosity caused by an excess of water in the concrete. It is only possible by the present methods to secure a true impact concrete by using hammers beating on the surface of the concrete in the molds. This is an expensive and most unsatisfactory operation, for it can only be successful when strong and expensive wooden or iron molds are used. If there is too much water in the concrete, true impact is not possible, and if there is too little a useless concrete is produced, liable to easy and quick disintegration. The passage of a truck or carriage over an uneven road results in continuous thumping or hammering, and it is the prime object of this invention to take advantage of this action, which is practically a series of impact blows on the bottom of the molds filled with concrete and placed on a carriage frame and made to traverse an indented or corrugated rail or road. The continuous and incessant thumping caused by the corrugated rail which the molds pass over knocks the particles of sand and cement together into a dense and compact form. The water and air are almost at once eliminated and rise to the surface of the slab or molded form of concrete. The quality of density is measured by the amount of action or energy applied to the carriage on which the molds are placed, and which may be regulated by the size, shape, and number of the indentations in the rail or road.

The accompanying drawing is supplied to show how this invention may be put into practice.

A is an ordinary truck or carriage, upon which is secured in any suitable manner and position the mold B, in which is placed the concrete which is to be operated upon.

C are the rails, which are formed with corrugations or teeth C′ of any convenient form or pitch, and which may be varied to suit the number or force of the blows which it is desired to impart. The rail, as shown, consists of a flange or base, D, with portions E of the rail itself cast in one piece with the base. Between these portions are fitted wooden lengths, preferably of oak or similar hard wood, F, corrugated like the iron ones, and forming with them one continuous rail. It will be understood that the rail could be made entirely of iron or other suitable material; but if it were made of iron only, the noise would be excessive, or, if made of wood only, the rails would not last long. Therefore a composite rail of some kind is preferred. The shaking of the truck could be accomplished by making the indentations or corrugations upon the periphery of the wheel and using a smooth rail, or making both wheel and rail rough; but in this case the truck could only be used for giving the blows, whereas with the arrangement shown in the drawing the truck may be run direct from the rough rail onto a smooth one, and the jogging would cease and the mold could be run off to any required place in which to set. Therefore for ordinary purposes the smooth wheel and rough road are preferred.

In the case of columns and similar forms which may be required to be made in a vertical position, the corrugated rail may be placed vertically, or nearly so, in a suitable framework, and the truck be drawn up and down against it by hand, steam, or other power, a convenient device—such as springs—being employed to keep the truck-wheels in close contact with the corrugated rails.

The trucks may be impelled along the rails by any suitable means, but in practice the best plan is to set the rails upon an incline, so that the truck, when released, will run along by its own weight, and may acquire sufficient impetus to carry it along the smooth continuation rails to its destination.

I do not wish to be understood as claiming, broadly, a method or means for compacting concretes, as I am aware that appliances have heretofore been employed for compacting such

by imparting a shaking motion to the mold by means of cams.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. As a means for jogging or shaking the molds for concrete and other materials requiring to be similarly shaken, the combination of the corrugated or rough rail or road with the smooth-wheeled mold carriage or truck, substantially as and for the purposes set forth.

2. As a means for jogging or shaking the molds for concrete and other materials requiring to be similarly shaken, the combination of the smooth rail or road with the corrugated or rough wheeled mold carriage or truck, substantially as and for the purposes set forth.

3. As a means for jogging or shaking the molds for concrete and other materials requiring to be similarly shaken, the combination of the corrugated or rough rail or road with the rough-wheeled mold carriage or truck, substantially as and for the purposes set forth.

4. The combination, with the carriage A, of the compound rail E F, constructed substantially as and for the purposes specified.

In witness whereof I, the said HENRY REID, have hereunto set my hand in the presence of two subscribing witnesses.

HENRY REID.

Witnesses:

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