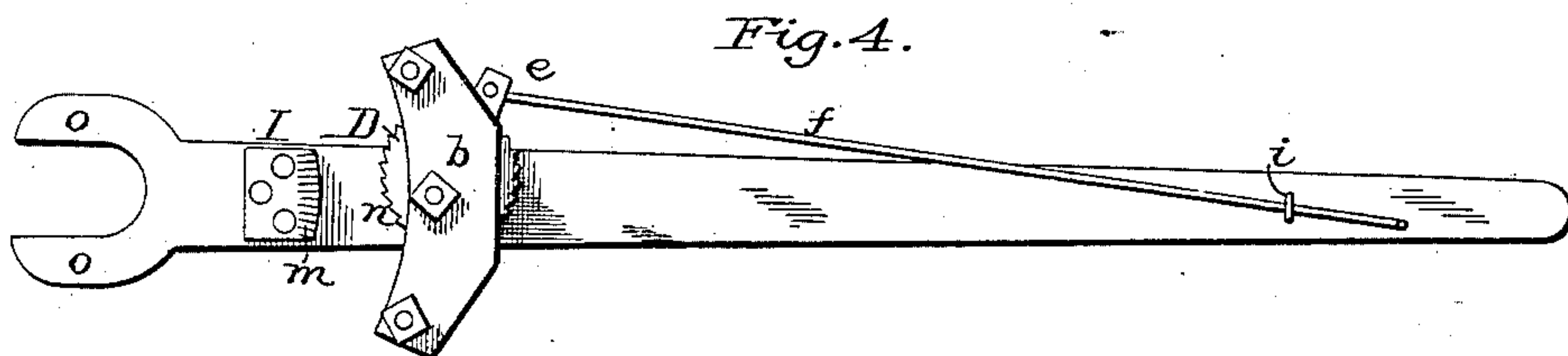
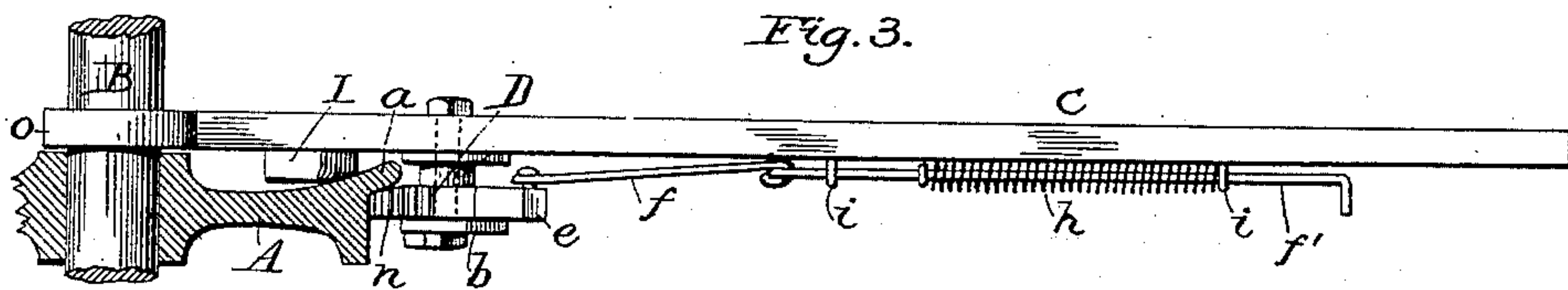
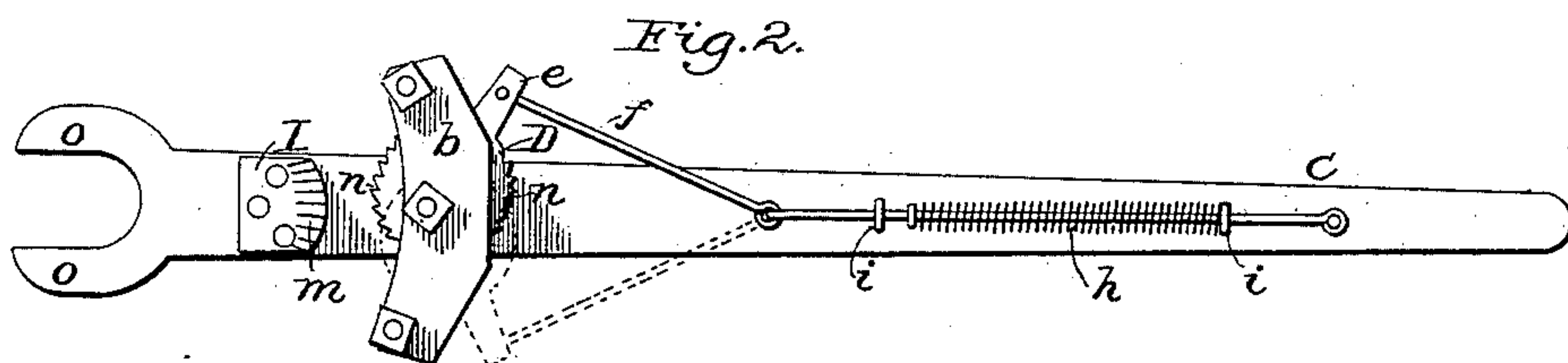
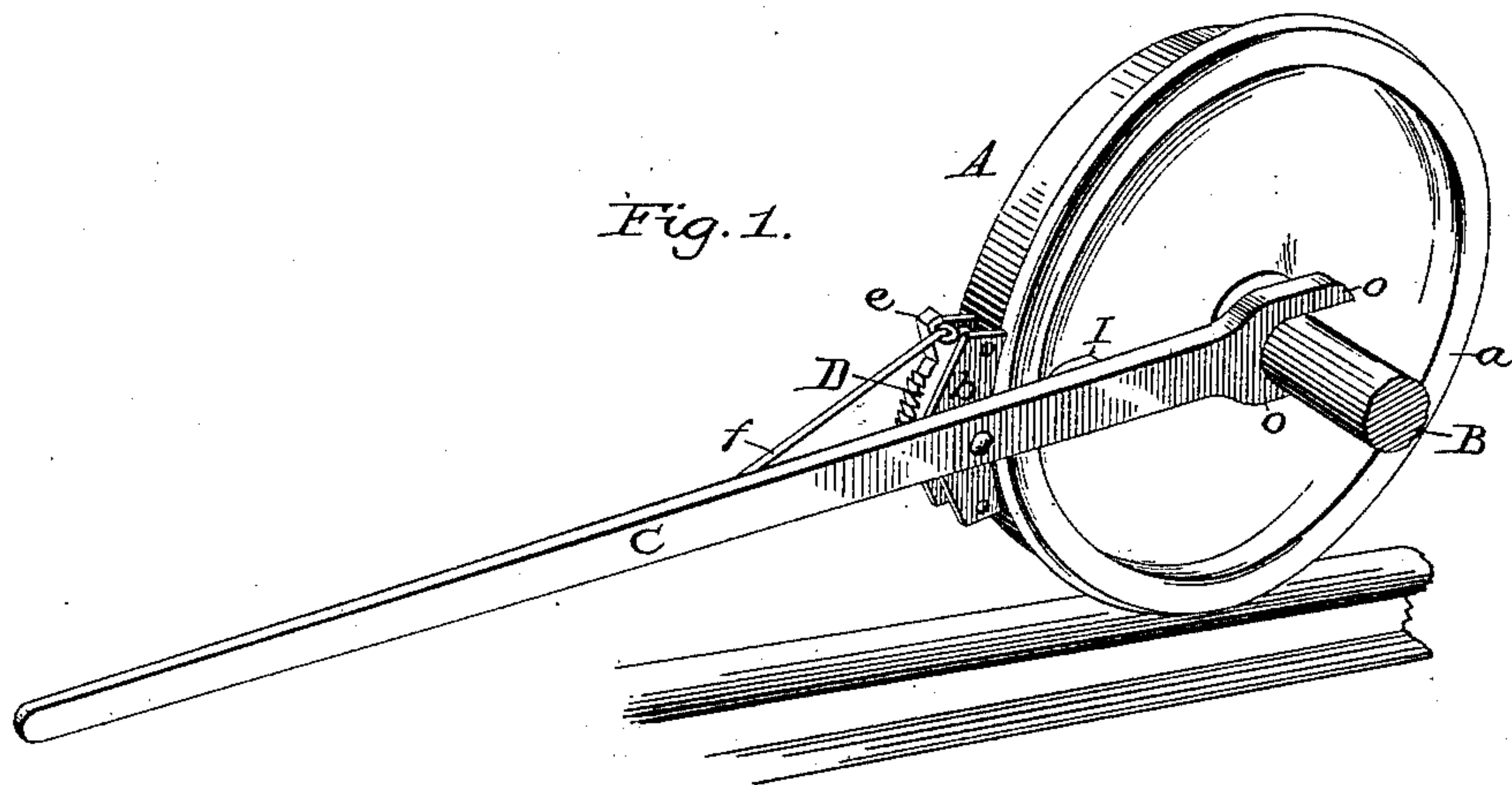


(No Model.)

E. P. WEAVER.
DEVICE FOR MOVING CARS.

No. 336,609.

Patented Feb. 23, 1886.



Witnesses:

James F. Duffame
Walter S. Dodge

Inventor:

Edward P. Weaver.
by Dodgerson.
Atty.

UNITED STATES PATENT OFFICE.

EDWARD P. WEAVER, OF SHELBY, MISSOURI, ASSIGNOR OF ONE-HALF
TO TAYLOR THOMPSON AND R. E. BODINE, BOTH OF SAME PLACE.

DEVICE FOR MOVING CARS.

SPECIFICATION forming part of Letters Patent No. 336,609, dated February 23, 1886.

Application filed January 2, 1886. Serial No. 187,414. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. WEAVER, of Shelby, in the county of Shelby and State of Missouri, have invented certain new and useful Improvements in Devices for Moving Cars, of which the following is a specification.

My invention relates to devices used for starting and moving cars by hand; and the invention consists of a lever provided with cams or jaws arranged to grip the flange of the wheel, together with certain details of construction, all as hereinafter more fully described.

Figure 1 is a perspective view showing the manner of applying and using my improved device. Fig. 2 is a side elevation of the device shown detached. Fig. 3 is a top plan view of the device applied to a car-wheel, the latter being shown in section to more clearly illustrate the parts, and Fig. 4 is a side elevation of the device slightly modified.

The object of this invention is to produce a device to be used by hand for the purpose of starting and moving cars about depots or stations, or at any point where it may be necessary or desirable, and by which a single person can exert the necessary force, and which when once applied will remain in place in connection with the car-wheel and axle for any desired length of time, or while the car is being moved any desired distance, and which, without detaching it, can be used to move the car either forward or backward at the will of the operator.

As is well known, it is often necessary to move cars both loaded and empty to and fro on the tracks about depots or stations for many purposes, and this is a difficult and laborious operation, often requiring the labor of several persons. Heretofore it has been customary to do this by pushing by main strength, a crowbar or lever with a short bent end being sometimes used to start a car by prying under the tread of the wheel, the heel of the bar or lever resting on the rail.

To construct my improved device, I provide a strong lever of the proper length—say from six to eight feet—and provide one of its ends with a slot of such a width that it can readily be slipped upon the axle B of the car, as shown in Fig. 1, C representing the

lever. If made of wood, the prongs at the end which embrace the axle will consist of short bars or strips of iron or steel, securely bolted to the body of the lever C; though, if preferred, the entire lever may be made of metal, in which case the prongs O may be welded or otherwise formed thereon, the only object of using wood for the body being to render the implement as light and convenient to handle as possible.

To one side of the lever C, I secure a block or jaw, I, as shown more clearly in Fig. 2, this block or jaw having its rear edge rounded or curved, as shown, and being so located that when the bifurcated end of the lever is placed on the axle B the rounded or rear edge of the jaw I will come in contact with the inner side or face of the wheel inside of the flange and nearly opposite the tread of the wheel, as shown in Fig. 3, most car-wheels being more or less concave at that point on their inner faces. This jaw I is beveled or rounded off at the point where it comes in contact with the wheel A, and is provided with a series of ratchet-teeth, *m*, one half of them pointing in one direction and the other half in the opposite direction, as shown in Fig. 2, so that when the lever has its rear end raised the upper set will bite or take hold on the wheel, and when lowered the opposite set may do the same. Ordinarily this jaw I will be stationary on the lever C, though it is obvious that it may be made adjustable thereon, to adapt the implement to wheels of various sizes, if desired; though by making the slot or fork at the end of the lever of the proper length the adjustment of the jaw I will be rendered unnecessary, as by that means the lever can be shoved forward or back on the axle far enough to bring the jaw I to the proper position to suit any of the usual sizes of car-wheels. A short distance in rear of this jaw I, I pivot to the lever C a double-faced cam or eccentric, D, as shown in Figs. 2, 3, and 4, it being held more securely in position by a couple of cross-bars or plates, *b*, the inner one of which is firmly bolted or otherwise secured to the lever, and the outer one being secured by bolts at its ends to the inner one, as shown, these plates *b* only being used to hold the cam or eccentric D more firmly in

position, especially if the lever be made of wood. This eccentric D is provided on its periphery with a double set of ratchet-teeth *n*, as shown in Fig. 2, those on one side pointing in one direction and those on the opposite side in the opposite direction, similar to those on the jaw I, and for the same reason—that is, to enable it to grasp the wheel to turn it either forward or back, as may be desired. This eccentric D is provided with a short arm, *e*, which is connected by a rod, *f*, which in turn is jointed to a sliding rod, *f'*, which is held to the side of the lever C by staples *i i*, or any equivalent means, as shown clearly in Figs. 2 and 3. On this sliding rod *f'* is placed a spiral spring, *h*, the front end of which is secured to the rod, while its rear end bears against the rearmost staple or other stationary stop, whereby the spring is made to push the rod forward, and consequently to throw arm *e* forward to one or the other side of the center, as shown in Fig. 2, thereby turning the eccentric on its pivot, so as to throw either one or the other of its sets of teeth to the front, according to which way the eccentric is turned, it only being necessary to draw back the rod the proper distance to enable the arm *e*, with its jointed rod *f*, to swing past the center from one side to the other, it being shown in one position by the full lines and in the opposite position by the dotted lines.

To use the implement it is only necessary to apply it to the car-axle and wheel, as shown in Fig. 1, with its forked end embracing the axle B, and the serrated face of jaw I bearing against the inside of the wheel, and then throw the eccentric over to the one or the other side, thus bringing its periphery or toothed edge against the tread of the wheel, as shown in Fig. 3. Then by raising the outer end of lever C the wheel will be grasped tightly between the serrated faces of the jaw I and the eccentric D, when the force applied to the lever will tend to roll the wheel over, and, of course, will cause the car to move in a corresponding direction. Whenever the force applied to the lever is insufficient to cause the eccentric to retain its grip on the wheel, the end of the lever can be lowered, the motion of the wheel tending to throw the eccentric back, or it can be drawn back by the rod, (which will be provided with a suitable handle for operating it,) and a new grip be taken on the wheel, when, by raising the end of the lever, the power will be again applied to the wheel to roll it along, and so on continuously, as long as may be desired, without detaching the implement from the axle and wheel. It will thus be seen that to move a car it is only necessary to apply the implement as shown, and work the free end of the lever up and down like a pump-handle, and thereby keep the car in continuous motion. It will readily be seen that the same result may be accomplished to a limited extent by the use of a single-faced jaw and eccentric—that is to

say, they may be made to grip the wheel and move the car; but in that case it could only be made to move it in one direction, and that if it were desired to move the car in the opposite direction it would be necessary to detach the implement from the wheel to which it was applied, turn it upside down, and apply it to wheel at the opposite side of the car; whereas by using the double-faced jaw and eccentric this extra labor and trouble are avoided, as they by merely throwing the eccentric to one or the other side of its pivot can be made to grip the wheel so as to turn it in either direction at will, and that, too, without changing or removing the lever from its position. For these reasons I prefer to make the jaw and eccentric double-faced, as shown; but I do not limit myself to their use, but propose to make them either single or double.

In Fig. 4 I have shown the device constructed without the spring, in which case the rod that operates the eccentric D may be made continuous without any joint, a single staple or guide only being required in that case. So, too, it is obvious that the spring may be used with the rigid rod *f'*, (shown in Fig. 4,) with equal advantage; and, finally, it is obvious to any one skilled in the art that by so shaping and pivoting the eccentric that when the implement is applied the eccentric will be held by gravity against the tread of the wheel, both the rod *f* and the spring *h* may be dispensed with; but I prefer to use one or both, as they render the implement more easy to apply and to manipulate.

Several of these implements can be used at once on a single car, if necessary, and thus the heaviest loaded cars can be moved to and fro by men with ease and facility.

Having thus described my invention, what I claim, is—

1. The lever C, having its end bifurcated to fit on a car-axle and provided with a gripping-jaw, I, and a pivoted eccentric, D, said parts being arranged to operate substantially as described.

2. The lever C, provided with the double-faced serrated jaw I, arranged to bear against the side of a car-wheel, and the double-pivoted eccentric D, arranged to engage with the periphery of the wheel, substantially as and for the purpose set forth.

3. In combination with the lever C, provided with the gripping-jaw I and the pivoted eccentric D, the rod *f f'* and spring *h*, all arranged to operate substantially as shown and described.

4. In combination, the lever C, provided with the jaw I and the pivoted eccentric D, and a rod, *f*, for moving said eccentric, substantially as herein set forth.

EDWARD P. WEAVER.

Witnesses:

I. N. FRAIM,
J. H. LAMB.