

PATENTED

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R. C. Vernol's Walking Vehicle.

74176

Fig: 1

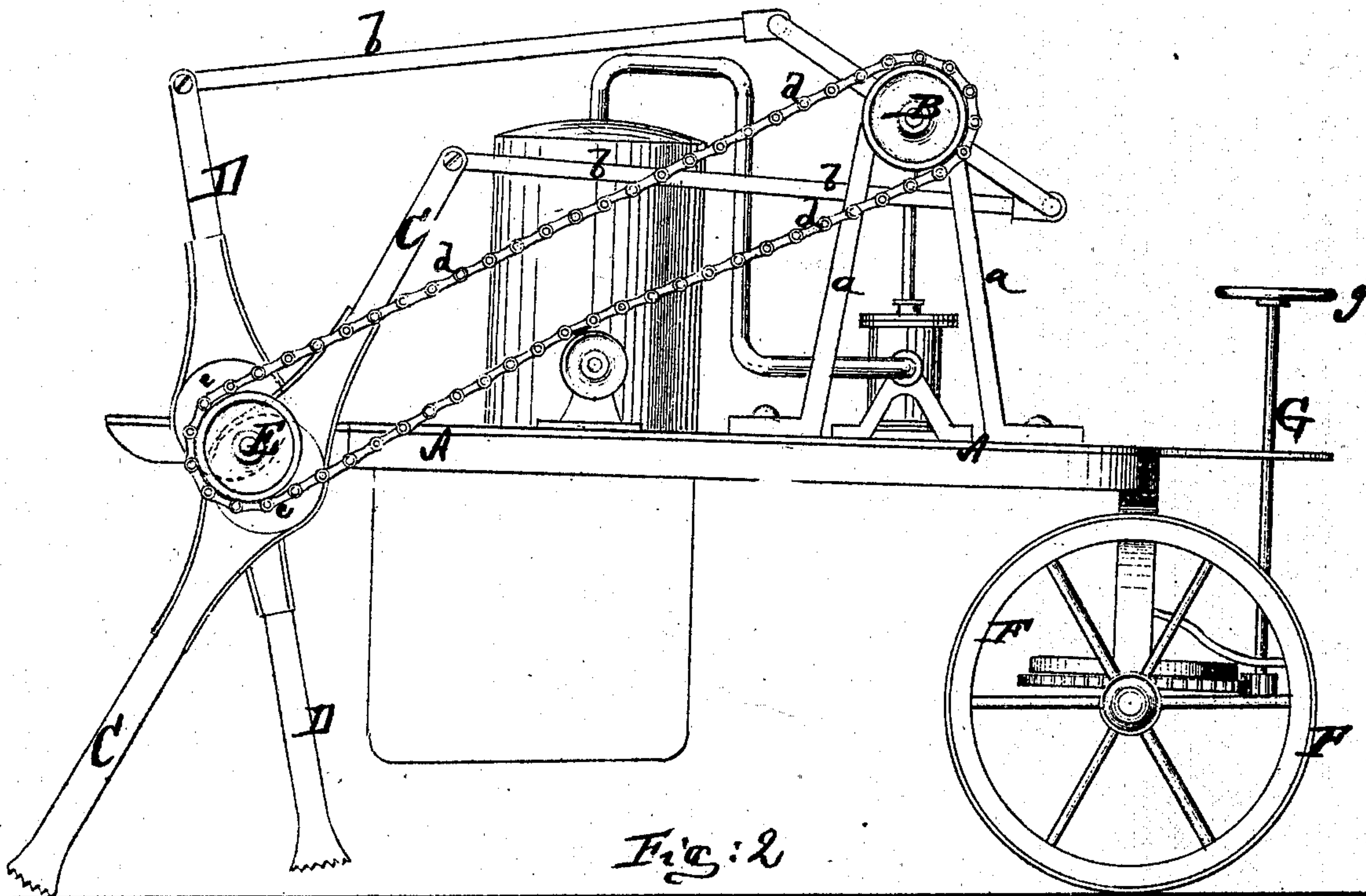
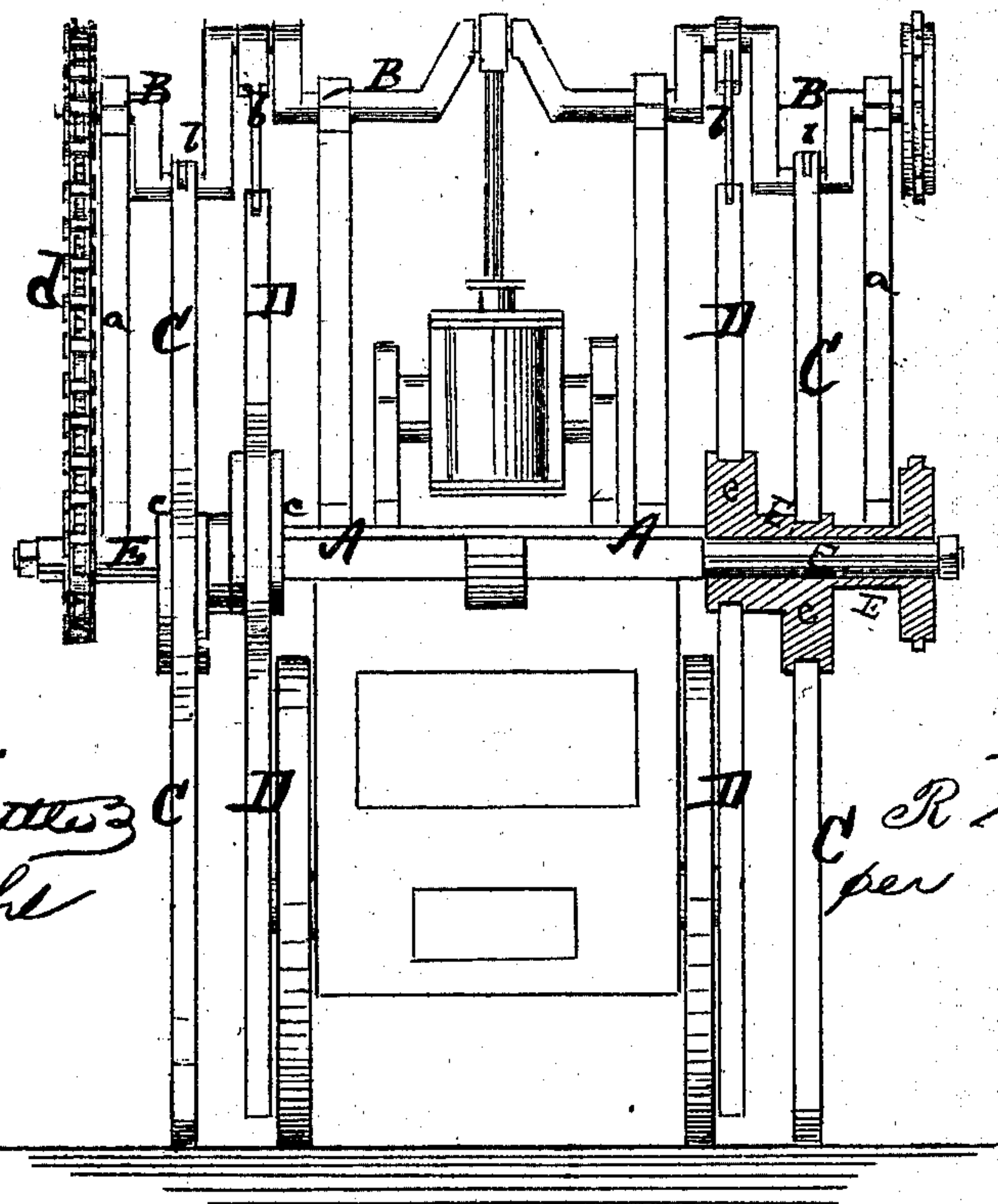


Fig: 2



Witnesses.

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R. C. VERNOL, OF NEW YORK, N. Y.

Letters Patent No. 74,176, dated February 4, 1868.

IMPROVEMENT IN WALKING-VEHICLE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, R. C. VERNOL, of the city and State of New York, have invented a new and improved Walking-Vehicle; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of my invention.

Figure 2 is a back view, partly in section, of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of operating vehicles, and consists in the use of legs, to which a motion is imparted, imitating, as nearly as possible, the motion of the human extremities. At least two legs or bars are arranged on each side of the platform of the wagon or vehicle, and are secured to and suspended from a horizontal axle, which has its bearings on the platform. On the shaft are two circular eccentric-cams, to which the legs are secured, the cams projecting equally far from opposite sides of the shaft. An alternate up-and-down motion is thus imparted to the two legs, on each side of the platform. The upper end of each leg is connected, by means of a suitable connecting-rod, with a crank-shaft, that receives rotary motion from suitable mechanism; thereby each leg receives oscillating motion around the eccentric-shaft. Thus each leg receives up-and-down motion by means of the eccentric, as well as oscillating motion by means of the crank-shaft. By the eccentric, it is raised while it makes a step, which is produced by the crank-shaft, and it then remains on the ground, and supports the weight of the machine, until the other leg, next to it, is brought forward and down. The weight of the machine is then transferred to the other leg or set of legs, and those that supported it before are raised and moved forward, to make a new step. The ends of the legs may be provided with shoes or pads, whereby they may be enabled to adhere to smooth or slippery ground. The machine will be useful for moving over ice, and also over even or uneven ground, and will be amusing as a toy.

A represents the platform, to which my improved moving-power is applied. B is a horizontal shaft, having its bearings in supports *a a*, which project from the platform A, and receiving rotary motion from a steam-engine, clock-work, or other suitable driving-mechanism. The shaft B is provided with cranks, as shown, which are, by means of rods *b b*, connected with bars C and D, which are pivoted to the platform, and which thus receive oscillating motion from the shaft B. On the pins or axles E E, by which the bars C D are secured to the platform, are mounted eccentric-disks *c c*, which fit into perforations through the bars, as shown. When the pins E receive rotary motion, by means of a chain, *d*, or other suitable mechanism, from the driving-shaft B, or from any other shaft, the bars C D are moved up and down by such rotary motion of the eccentrics. At the same time, they receive oscillating motion by means of the connecting-rod *b*. On each side of the platform A should be at least one pair of bars, C D, which pair may be pivoted by means of the same pin E, as shown, or each bar may have its own pivoting-pin, if desired. In either case, the eccentrics project to opposite sides from the same pin, or from the two nearest pins E, if but two bars, C D, are used on each side, so that when one bar is moved up, the other moves down, and *vice versa*. At the same time, the cranks, with which these two bars C D are connected, project from different sides of the shaft B, so that the lower end of that bar which is being raised may be moved forward, while the lower end of that bar which is being lowered is moved backward, or at least is attempted to be moved backward, for it will not move or slip on the ground, but will remain on the place on which it first touched it, and thus, instead of moving the lower end of the bar backward, the whole platform, and all its appendages, will move forward. To make the ends of the bars or legs C D adhere to the ground, they may be serrated, as shown, or may be provided with rubber or other shoes. The whole apparatus may solely move on such legs C D, or may, if desired, be supported in front by two steering-wheels, F F, which can be revolved around their ring-bolt by means of a shaft, G, having a hand-wheel, *g*, as shown. Opposite to each leg, on one side, should be another leg, on the other side of the platform, and such opposite legs should move simultaneously in the same directions, so that the platform may receive even and gentle motions.

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

The legs C D of a walking-vehicle, when they are connected with the eccentric-shafts E E, and with the crank-shaft B, in such a manner as to receive up-and-down as well as oscillating motion, substantially as and for the purpose herein shown and described.

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Witnesses:

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