

(No Model.)

T. P. & J. B. HALL.

ROLLER SKATE.

No. 297,388.

Patented Apr. 22, 1884.

Fig. 1.

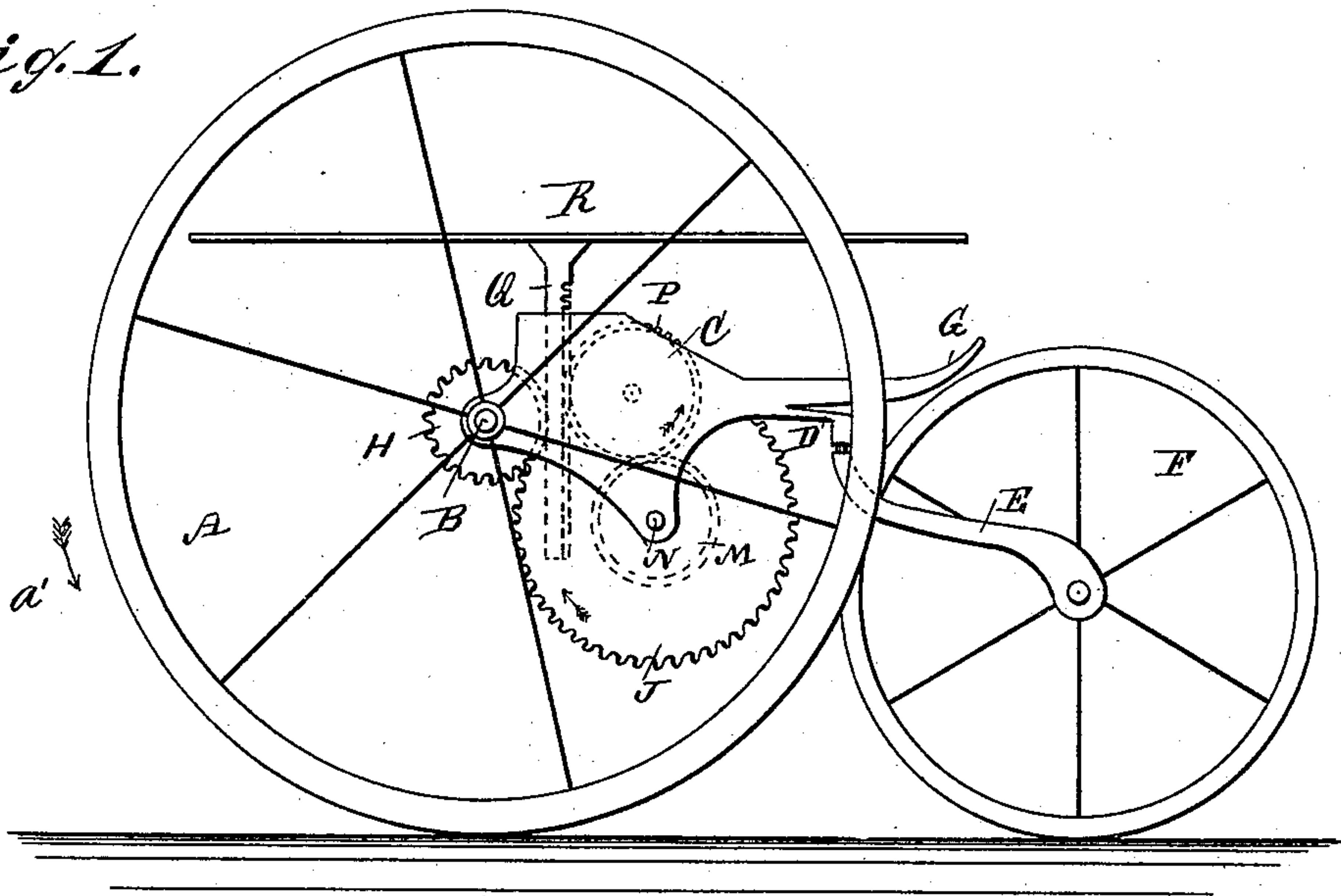


Fig. 2.

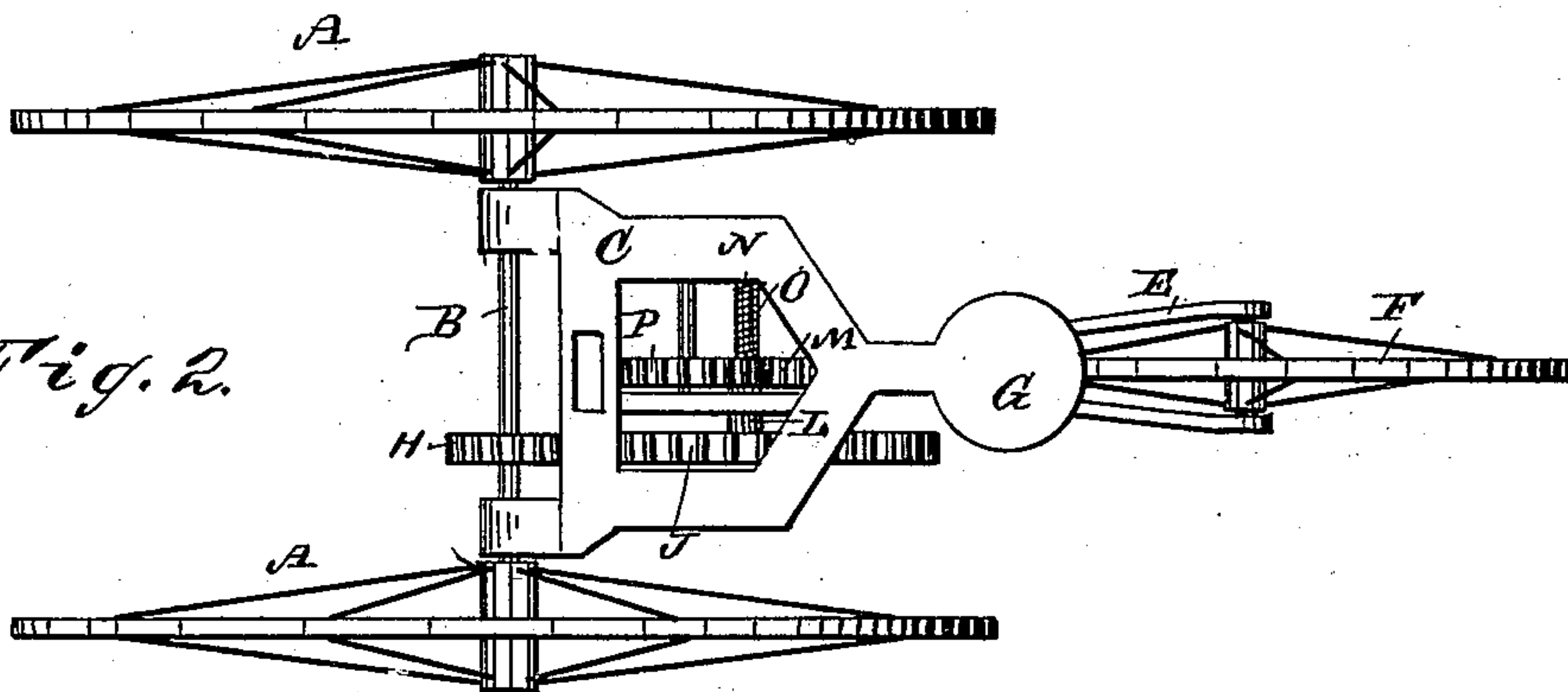
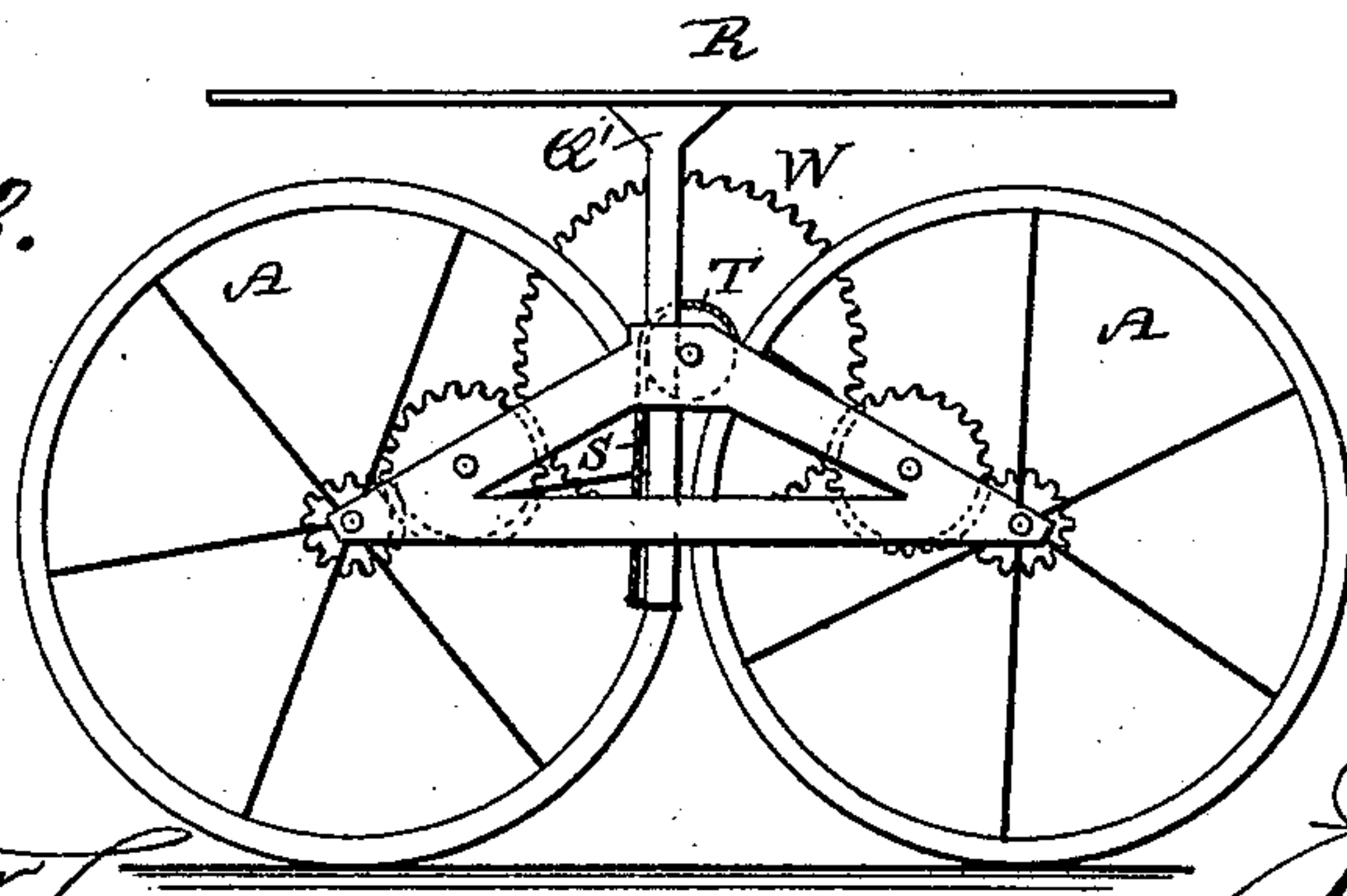


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 297,388, dated April 22, 1884.

Application filed September 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, TOMAS P. HALL, of Toronto, Province of Ontario, Canada, and JAMES B. HALL, of Georgetown, Province of Ontario, Canada, have invented a new and Improved Roller-Skate, of which the following is a full, clear, and exact description.

The object of our invention is to provide an improved motor or vehicle, which can be attached to the foot.

The invention consists in a small vehicle adapted to be fastened to the foot, and constructed with a vertically-reciprocating platform, from which the motion is transmitted to the driving-wheels by suitable gearing or belts, the said platform being pressed upward by a spring and downward by the foot, the gearing being provided with a clutch, which locks or engages when the platform is pressed downward and slips when the spring presses the platform upward. The rear wheel is journaled on a fork pivoted to a spring-arm of the frame, above which spring a tongue projects, which serves as a brake.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of our improved gravimotor. Fig. 2 is a plan view of the same, parts being omitted; and Fig. 3 is a longitudinal elevation of a modification of the same.

Two driving-wheels, A, are mounted on the ends of a shaft or axle, B, journaled in the front part of a platform-frame or foot-rest, C, which is provided at its rear end with a projecting spring-arm, D, to the end of which a fork, E, is pivoted in such a manner that it can swing laterally, a third wheel, F, being journaled in the said fork. A bracket-plate, G, projects from the rear of the platform C, over the spring D, and over part of the rear wheel. A pinion, H, is rigidly mounted on the axle B and engages with a cog-wheel, J, pivoted to the downwardly-projecting part of the frame C. On the wheel J a clutch-disk, L, is formed, and a like clutch-disk is formed on a cog-wheel, M, loosely mounted on a shaft, N, on which the wheel J is mounted. A

spring, O, coiled around the shaft, has one end connected with the cog-wheel M, and the other end to the frame of the platform C. The cog-wheel M engages with a cog-wheel, P, which in turn engages with a rack, Q, supporting a platform, R, or foot-plate. The rack Q passes through a suitable opening in the platform C.

In the modification shown in Fig. 3 two or four wheels can be provided, all of which are drivers. In place of the rack Q, a rod or bar, Q', is provided, which has a strap or belt, S, attached to its lower end, the other end of which strap is secured to a wheel, T, mounted on the same shaft with a cog-wheel, W, from which the motion is transmitted by suitable means to the shafts of the driving-wheels. If the plate R is depressed, the clutch-disks engage and the wheels A are revolved in the direction of the arrow *a'* by the intermediate gearing-belt or other device. Thereby the spring O is brought in tension. When the pressure is removed from the plate R, the spring O uncoils or expands and turns the cog-wheels M and P in such a manner as to throw the rack Q and the plate R upward, the clutch-disks sliding over each other, and thus permitting the wheels A to revolve in the direction of the arrow *a'*. The vehicle can thus be propelled forward by pressing the plate R down by means of the foot, and then permitting it to rise alternately. As a motor is fastened to each foot, it is only necessary to bring the weight of the body on each foot alternately. If the weight of the body is brought on the rear end of the foot-plate R, the spring-arm D is bent slightly, and the end of the tongue G will be brought in contact with the wheel F, and thus serve as a brake.

The vehicle can be operated very easily, and very great speed can be obtained.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A foot-power vehicle or wheel-skate having a foot-rest downwardly movable by the gravity of the operator and upwardly by a spring, for the purpose specified.

2. The combination, in a gravimotor having two front wheels, with a rear wheel, F, of

a spring-supported brake-plate and a vertically-reciprocating foot-rest, whereby the brake may be applied by throwing the weight on the heel, as described.

5 3. A gravimotor having the front wheels, A, the bearing-frame C, a single rear wheel, F, and a bearing frame or fork, E, jointed to said frame C, as shown and described.

10 4. The combination, with a platform, C, of the vertically-reciprocating platform R, the shaft B, the driving-wheels A, the pinion H, the cog-wheels P, M, and J, the clutch L, the spring O, and the rack Q, substantially as herein shown and described.

15 5. The combination, with the frame C, pro-

vided with the spring-arm D, of the fork E, pivoted to the arm D, the wheel F, and means for revolving the driving-wheels, substantially as herein shown and described.

6. The combination, with the frame C, pro- 20 vided with a spring-arm, D, and a tongue, G, of the fork E, pivoted to the spring-arm D, the wheel F, and means for revolving the driving-wheels, substantially as herein shown and described.

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Witnesses:

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