(No Model.)

M. M. CONGER.

Motor.

No. 236,555. **Patented Jan. 11, 1881.**

Fig. 1.

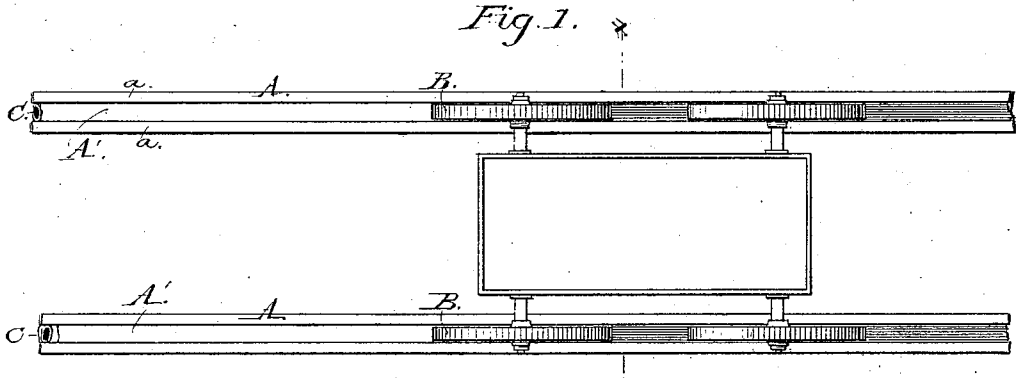


Fig. 2.

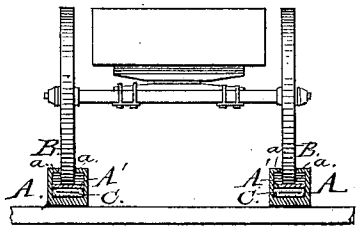


Fig. 3.

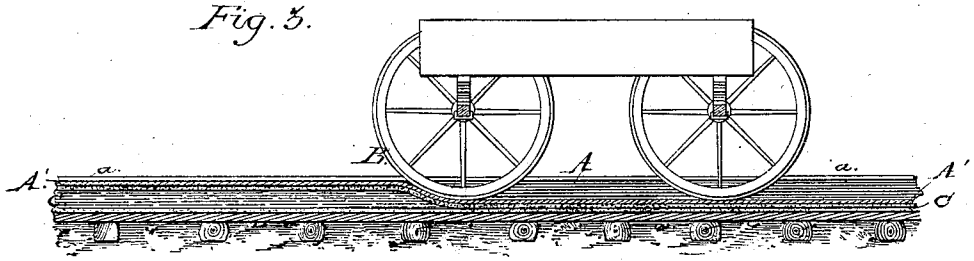
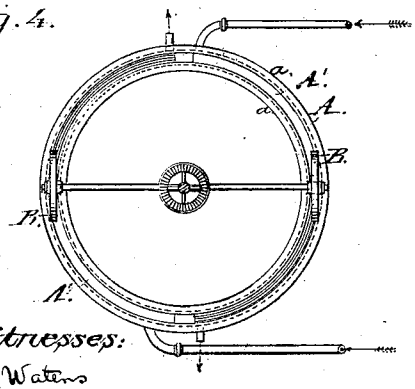


Fig. 4.



Witnesses:
Edmund Watson
Jamel Pindy Jones

Inventor:
Milton M. Conger
per Edw. W. Dorr & Co.
Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MILTON M. CONGER, OF WELLSVILLE, MISSOURI.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 236,555, dated January 11, 1881.

Application filed October 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, MILTON M. CONGER, of Wellsville, in the county of Montgomery and State of Missouri, have invented certain new and useful Improvements in Motors, or impelling mechanism to be operated by steam, water, air, or other fluid substance; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to a device for impelling vehicles and machinery through the agency of steam, water, compressed air, &c., in a manner hereinafter to be described.

It consists, principally, in providing a means for imparting motion to vehicles and machinery by the employment of soft tubing beneath a flexible bearing-surface for traction-wheels, which tubing and flexible bearing, under the influence of steam, water, air, or other expansible or compressible fluid forced into said tubing, will form a wedge-shaped or inclined wall or abutment immediately in rear of the tangential bearing of said wheel, with the effect to propel it in a given direction, the momentum of which wheel will furnish an impelling force to carry a vehicle or any machinery.

In my drawings, Figure 1 is a plan view, showing a straight track and a wheel-vehicle bearing thereon. Fig. 2 is a transverse section on line *x x* of Fig. 1. Fig. 3 is a longitudinal section of same on line *y y*. Fig. 4 is a plan, showing the application of the principle of my invention as applied to a track of a concentric circular form.

Referring to the drawings, A is a tubular track, formed of metal or other suitable material, rectangular in general form, open at the top to form a longitudinal slot or groove of a width sufficient to receive the rim or felly of a wheel, B. Within this tubular track is run a flexible tube, C, formed of elastic material, having a texture which will resist the permeating tendencies of the substance to be forced into it. Between this tubing and the flanges *a* formed by the opening in the track is run a metallic plate or ribbon, which bears upon the said tubing and receives directly the wheel B with its superincumbent weight. By a suitable valve the destination end of the said tube is opened, while the opposite or starting end receives the fluid or substance which expands or distends the said tube to its utmost capacity. The bearing-point of the wheel B, by gravitation, bears upon the metallic ribbon A′ and indirectly upon the tubing C, and separates the empty from the filled parts as said wheel is driven forward. When the filling substance is introduced into the tube, the wheel B being in position, an inclined plane, it will be seen, is formed immediately in rear of the bearing-point, the surface of which plane, bearing against the periphery of the wheel, forces it forward, and as said filling follows the yielding weight an even and constant movement is effected. This principle may be variously applied, and by way of illustration I show in Fig. 4 of my drawings a circular or endless track of open tubular rails, with a flexible tubing and metallic ribbon bearing-plate similar to that of the straight track. A truck formed of an axle and two wheels, which I use in this illustration, is driven from opposite directions about a common axis of motion over said circular track. In this application it is necessary to have two independent sections of flexible tubing, each of which embraces one-half of the track, or, in other words, two semicircular pieces, which will be separated by narrow dead-spaces, which must be so formed as to offer no obstruction to the movement of the wheels as they are passing opposite points between the filled and exhausted ends, as said points would have to be passed through the influence of the momentum gained by the last impulse of the said filled ends. Both pipes being simultaneously relieved of their pressure until after the bearing-points of the wheel were passed, they would be immediately refilled for renewed impulse. In this illustration, Fig. 4, the axis of motion E would represent a shaft upon which would be fixed the driving-wheel of the machinery to be driven.

I do not claim, broadly, the use of the flexible tubing under the influence of air or other fluids forced thereinto to drive vehicles or machinery, as I am aware that such has been used in various connections before.

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

1. A flexible tube capable of being filled and expanded, in combination with an open metallic tube, which will form solid bearing-surfaces to the exterior surface of said flexible tube, and a flexible ribbon or bearing-plate to receive a rolling weight, as and for the purpose set forth.

2. The open tubular rail, rectangular in sectional form, or transversely, having flanges at its top to afford bearing-surfaces to a flexible metallic ribbon or plate, in combination with a flexible tube, as and for the purpose specified.

3. The combination of tube A, provided with flanges *a*, plate or ribbon A′, and flexible tube C, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

MILTON M. CONGER.

Witnesses:
WM. HELMICK,
I. N. KOLB.