

H. THOMPSON.

Velocipede.

No. 90,797.

Patented June 1, 1869.

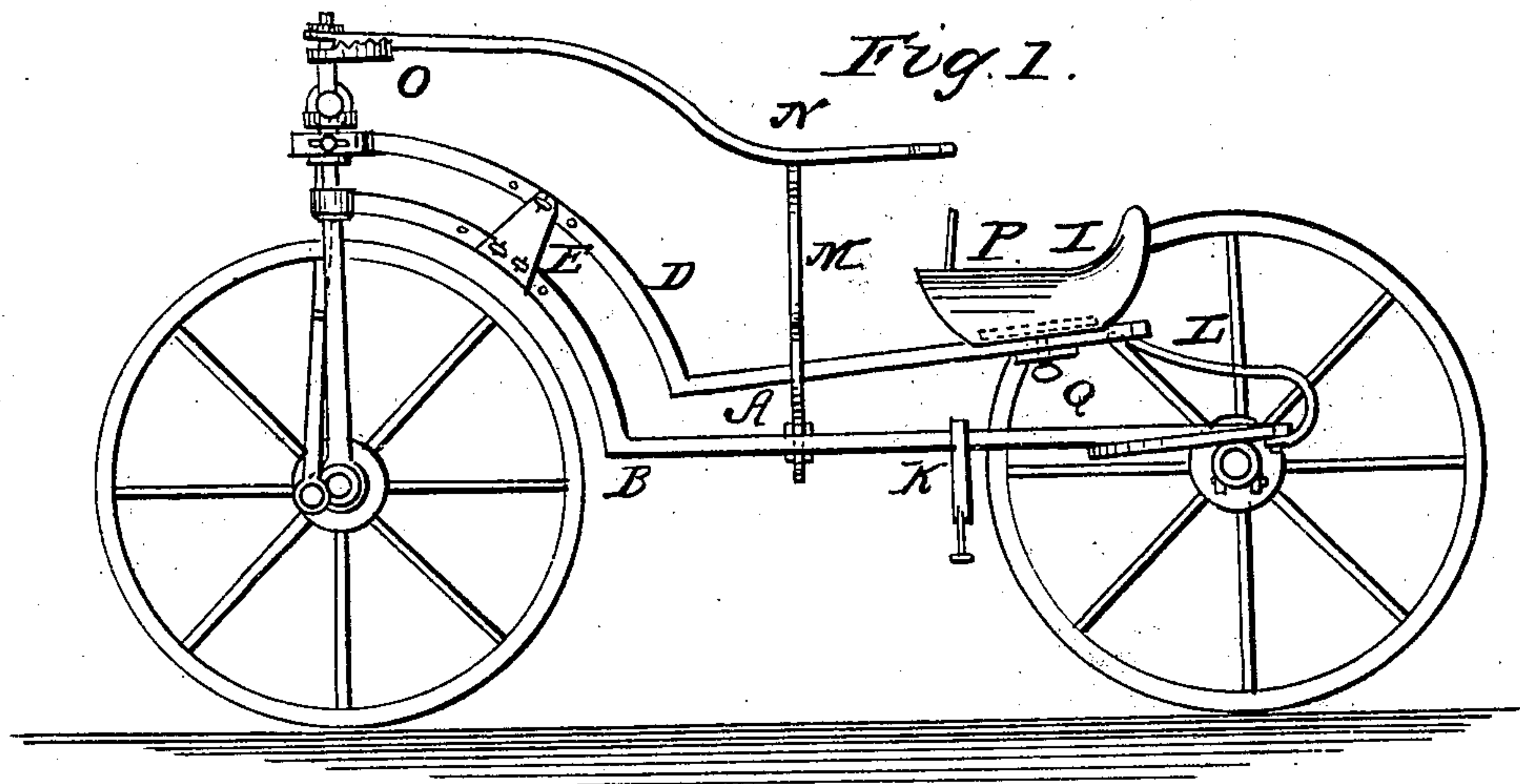
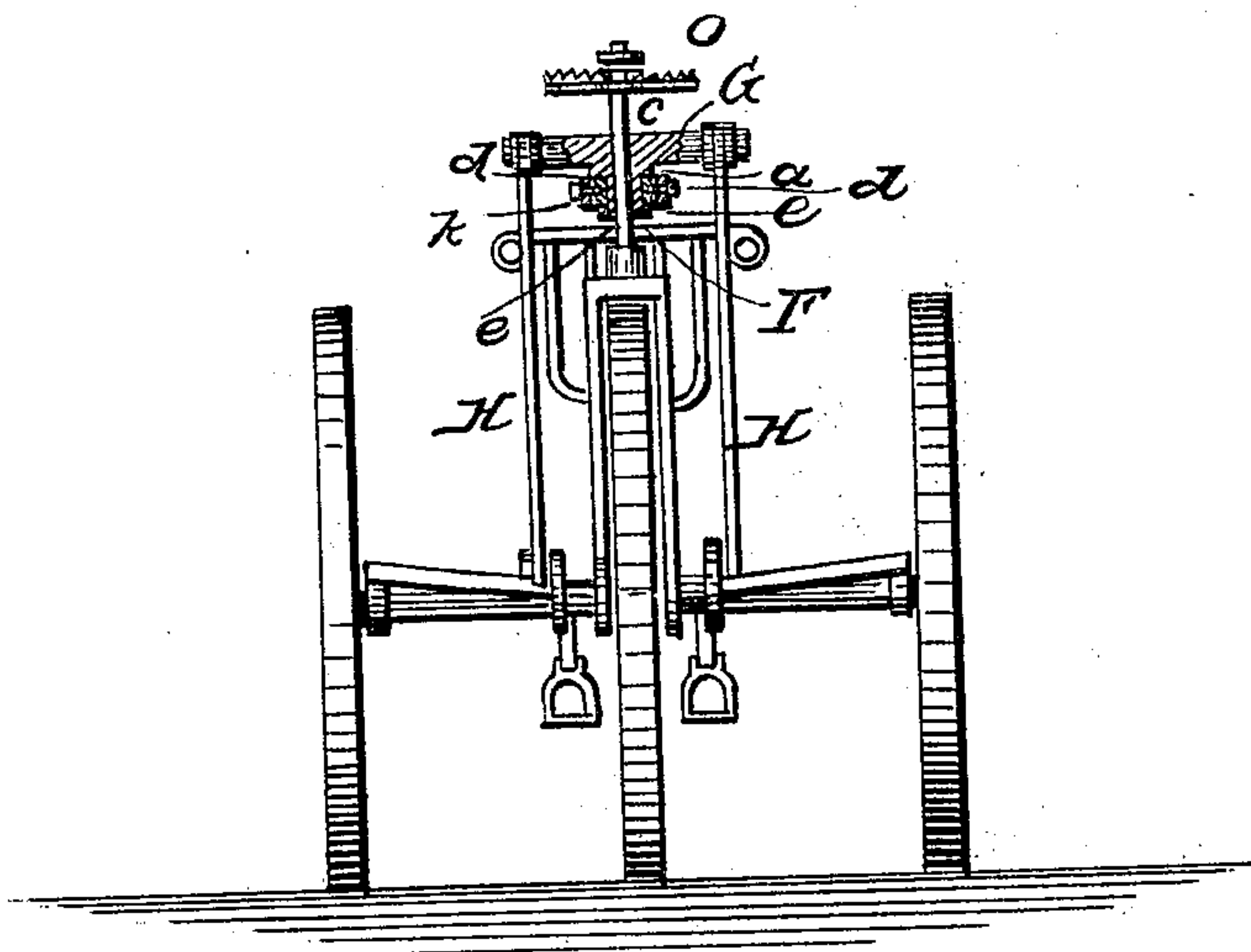


Fig. 2.



Witnesses
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HENRY THOMPSON, OF MOBILE, ALABAMA.

Letters Patent No. 90,797, dated June 1, 1869.

IMPROVEMENT IN VELOCIPEDS.

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, HENRY THOMPSON, of Mobile, Mobile county, Alabama, have invented a new and improved Velocipede; 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 drawing, forming part of this specification.

This invention relates to improvements in velocipedes, designed to provide a simple and efficient arrangement for obtaining the motive-power by a rising and falling movement of the operator, applied to an operating-lever, similar to the motion of riding on horseback, and for imparting the same to the front wheel of a machine, preferably having three or more wheels.

The invention consists in the arrangement of a vibrating lever, pivoted to the frame, and connected, at the front end, to a cross-head, and working upon the crotch, and connected by rods to the cranked axle, the rear end being formed with a saddle for the operator, also with springs arranged to be compressed during the downward movement of the lever, by which the power is applied, and thereby acts in conjunction with the momentum of the machine, in restoring the lever to the elevated position when the weight of the operator is removed.

The invention also consists in the arrangement of the adjustable rest for the steering-lever, the lever carrying the saddle and its adjustable fulcrum, with each other and the reach, or frame of the velocipede, as will be hereinafter more fully described.

Figure 1 represents a longitudinal sectional elevation of a machine constructed according to my improvement.

Figure 2 represents a front elevation, partly in section.

Similar letters of reference indicate corresponding parts.

To the frame A, of a three-wheeled velocipede, or one having more than three wheels, which I prefer, for strength, to arrange horizontally from the rear axle to the point B, near the front wheel, and there curve, in the manner represented, to the top of the wheel, where it is fitted to the shaft C, of the crotch, so that the latter may turn freely, I pivot a bent lever, D, on a support, E, adjustably connected to the said reach, and to which the said lever D is also adjustably connected.

The said lever is crotched at the end, for engagement to each side of a sleeve, F, of a cross-head, arranged to work up and down upon the shaft C, of the crotch, and each branch, *a b*, thereof is provided with a slotted hole, for connection thereto by screws, *d*, the said slotted holes permitting the curved move-

ment of the end of the lever, while the cross-head moves in a vertical line.

To permit the cross-head to oscillate with the front wheel in steering, a ring, *e*, is provided in a recess in the sleeve of the said cross-head, and the screws *d* take into that.

The said cross-head G is connected, by rods H, to the cranks, one on each side.

For imparting vibratory motion to the lever D, I arrange, upon the opposite end thereof, a saddle, I, whereon the operator may sit, having his feet engaged in the stirrup, K, suspended from the reach, in a manner to alternately support his weight on the saddle and in the stirrups.

L represents springs connected to the rear axle, with their free ends arranged under the saddle to raise it upward after being pressed down.

M represents a rest for the steering-lever, N, also for the hands of the operator, and to assist in mounting the saddle. It consists of a light metallic frame, having a cross-bar at the top, and supported by two posts in the frame, and adjustably connected thereto.

The steering-lever N is connected loosely to the top of the shaft C, and takes into a notched segment, O, on the said shaft, for imparting oscillating movement to the said shaft, and by means of the said segment, the shaft may be turned to a greater extent than the range of the arms would permit if the lever N were rigidly connected to the shaft C.

It will be understood, from the foregoing description, that the weight of the operator is the means of propelling the machine, by resting on the saddle until it is pressed down and the cranks elevated, then, by rising up on his feet, the weight is transferred to the stirrups, and the momentum thus imparted to the machine, together with the action of the springs, will elevate the saddle, continuing the motion of the cranks until the next application of the weight upon the saddle, as before. This may be continued indefinitely, and a very high rate of motion attained.

My improvements in the arrangement of the saddle consist in adapting it either for a side-saddle, or riding astride.

In the present representation, it is adjusted for a side-saddle, the pommel being in the rear, and a detachable crotch being placed in the front, wherein to support the leg of the rider at the knee-joint.

The crotch P may be readily removed, and the saddle turned around, with the pommel at the front, by loosening the centre-bolt Q, by which it is attached.

Instead of the crank-connection of the rods H to the front axle, as herein shown, I may, if preferred, employ a grooved disk-connection, so shaped that

the connecting-rods may have assistance in passing over the centres.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the lever D and crotched connection with the front wheel, of the cross-head and rods H, connecting with the cranks, substantially as specified.

2. The arrangement of the rest M, fulcrum E, and

lever D, with relation to each other and the frame, or reach, as herein described, for the purpose specified.

The above specification of my invention signed by me, this 27th day of February, 1869.

HENRY THOMPSON.

Witnesses:

FRANK BLOCKLEY,
E. GREENE COLLINS.