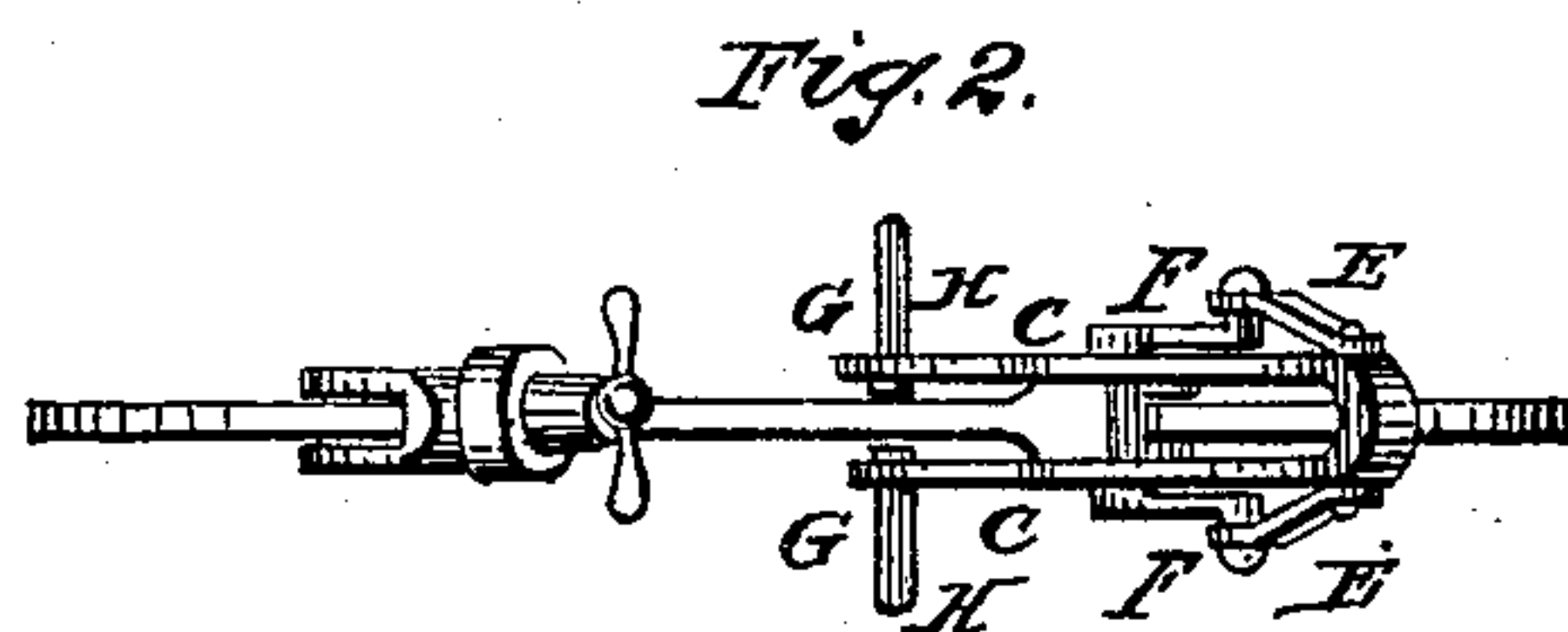
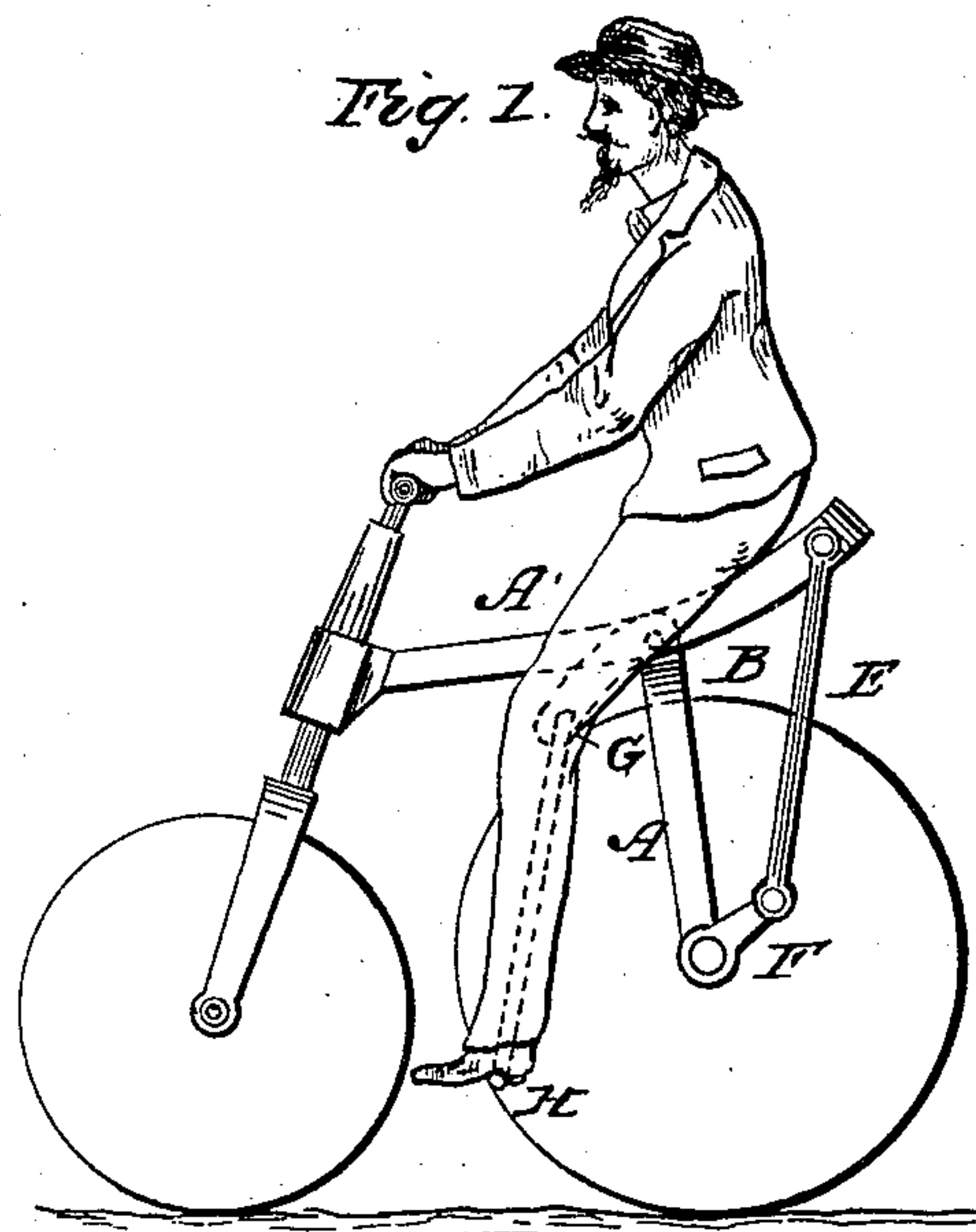


A. NIELSEN.

Velocipede.

No. 90,774.

Patented June 1, 1869.



Witnesses
Gustave Dietrich
Jno. H. Brooks

Inventor
Alfred Nielsen
per *Wm. H. [Signature]*
Atty's

United States Patent Office.

ALFRED NIELSEN, OF WILLIAMSBURG, NEW YORK.

Letters Patent No. 90,774, dated June 1, 1869.

IMPROVEMENT IN VELOCIPEDES.

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, ALFRED NIELSEN, of Williamsburg, county of Kings, and State of New York, have invented a new and useful Improvement in Velocipedes; 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.

The object of this invention is to provide an improved arrangement of the propelling-mechanism of velocipedes, for applying the power by a rising and falling movement of the operator, similar to that of riding on horseback, the apparatus being applicable to two or three-wheeled velocipedes.

It consists in an arrangement of vibrating saddle-bar, pivoted centrally, or nearly so, to a crotch-support, rising over the hind wheel from the axle, and connected at the rear end by rods to the cranks, and having stirrups suspended from the front end, all as hereinafter more fully specified.

Figure 1 represents a side elevation of my improved machine, with a rider thereon.

Figure 2 represents a plan view of the same.

Similar letters of reference indicate corresponding parts.

In this instance, I have represented my improvements as applied to a two-wheeled machine, one in advance of the other.

The connecting-bar, or reach A A' rises in the part A', or crotch for the hind wheel, nearly vertical, and supports, at or near the junction of the two parts, on a pivot, B, a double or slotted vibrating-saddle lever, C, connected at the rear end by rods, E, with the cranks F, one on each side.

From the front end, at G, stirrup-rods, H, are suspended.

The front wheel is supported in a guiding-crotch, I, of ordinary construction.

The rider, sitting on the saddle-lever at the rear end, will vibrate that end downward, imparting a forward motion to the wheels, when the cranks are slightly in advance of the vertical line, and above the centre horizontally, and rising and transferring his weight to the stirrups, when the cranks have finished the downward movement, will continue the motion by forcing the crank upward, as represented in the position shown in the drawing.

The continuation of these movements keeps the machine in motion, and, in this way, a higher rate of speed may be obtained than when the power is applied wholly by the feet to the cranks, for, in this case, the whole power of the operator is applied, while in that it is divided.

By this plan, also, it is more easy to steer the machines, as the power is applied on both sides alike, avoiding the alternate side-strains due to pushing on the cranks with only one foot at a time.

Having thus described my invention,

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

The double or slotted saddle-bar C, pivoted to the reach, or connecting-bar A A', at the angle of the same, provided at its front end with the pivoted operating-stirrups H, and connected at its rear end to the cranks F, by means of the connecting-rods E, all arranged as described, for the purpose specified.

The above specification of my invention signed by me, this 29th day of March, 1869.

ALFRED NIELSEN.

Witnesses:

FRANK BLOCKLEY,
E. GREENE COLLINS.