F. J. REINHOLD.

VELOCIPEDE.

No. 171,862. Patented Jan. 4, 1876.

Fig. 1

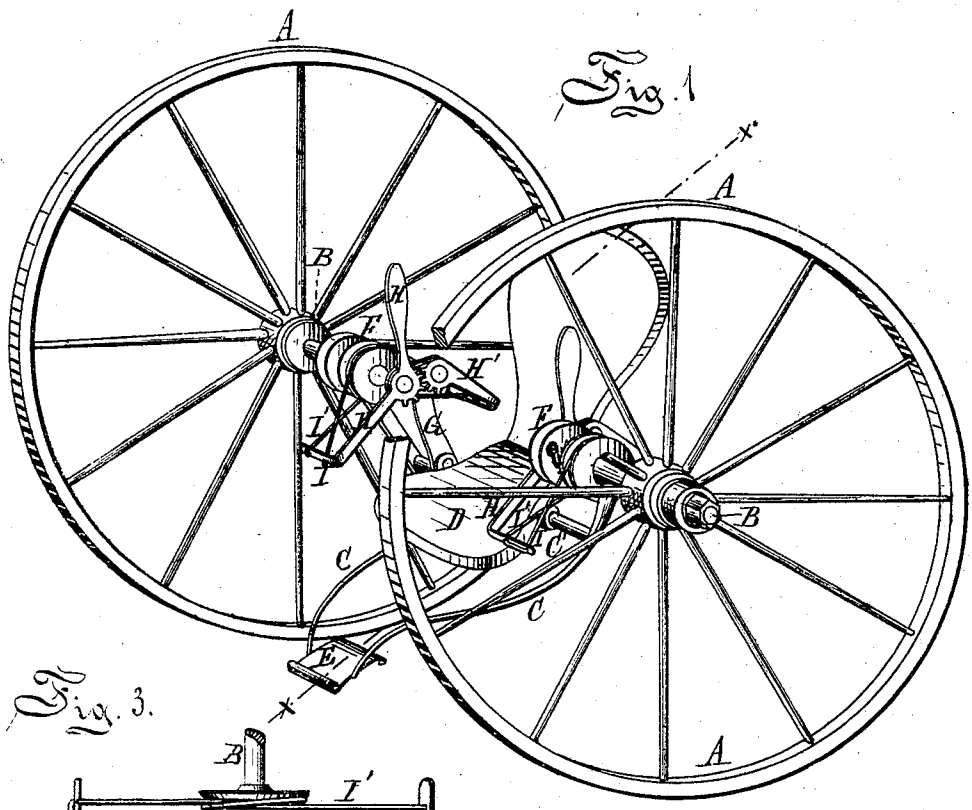


Fig. 3.

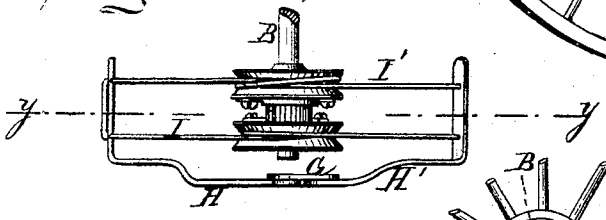


Fig. 2.

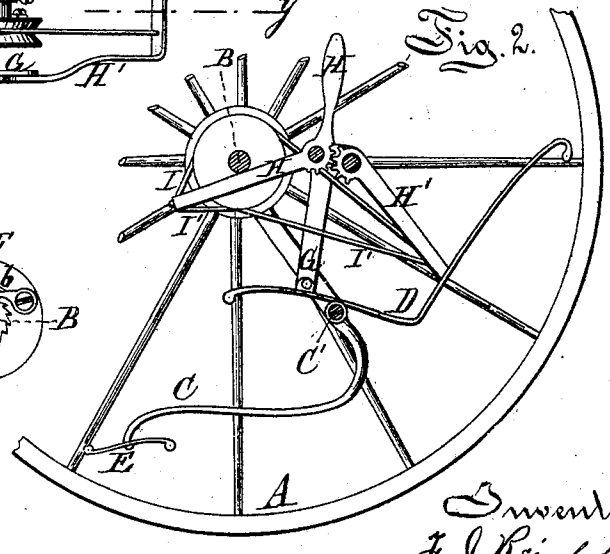
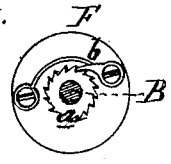


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANZ JOSEPH REINHOLD, OF DETROIT, MICHIGAN.

IMPROVEMENT IN VELOCIPEDES.

Specification forming part of Letters Patent No. **171,862**, dated January 4, 1876; application filed November 23, 1875.

To all whom it may concern:

Be it known that I, FRANZ J. REINHOLD, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Velocipedes, of which the following is a specification:

The object of my invention is to so construct a velocipede that the rider can sit in an oscillating chair, hung between the driving-wheels, and by rocking himself propel the vehicle through suitable devices for transmitting power and motion from the chair to the wheels; and it consists in the peculiar construction and combination of the various parts to this end, as more fully hereinafter set forth.

Figure 1 is a perspective view. Fig. 2 is a partial vertical section at *x x*. Fig. 3 is a plan of one ratchet, its two pawl-sleeves, and connections. Fig. 4 is a cross-section at *y y*, showing the ratchet and one of its pawls in side elevation.

In the drawing, A represents two traction-wheels of large diameter, each secured to a short axle-arm, B, which is journaled through a curved pendant-frame, C, the two sides of which are connected by a girt, C′, on which is pivoted the seat of a chair, D. At the lower end of the frame C there is a foot-rest, E. On the inner end of each axle-arm is keyed a ratchet, *a*, having a wide face, with one side of which a spring-pawl, *b*, engages, which pawl is pivoted on the adjacent face or side of a grooved pulley, F, sleeved on said axle. There are two of these pulleys, one at each side of the ratchet. To each side of the seat of the chair there is pivoted a standard, G, with a T-headed top, to which is pivoted at its angle a bell-crank lever, H, having its forward end bent across the plane of the grooved pulleys. A lever, H′, is also pivoted to the top of said standard G, and its rear end is bent across the plane of the grooved pulleys F. The levers H H′ are also geared together by a geared sector on the heel of each, so that by moving the upper limb or handle of the lever H the ends of both may be adjusted toward or away from each other. A cord, I, is taken from the end of the lever H, around over one of the pulleys, thence to the end of the lever H′. A similar cord, I′, is taken from said lever H, around the other pulley, passing underneath it, to the end of the lever H′. Then, by vibrating the chair and its attachments, the ratchets will be continuously rotated by their respective pawls as one cord or the other is rotating forward its pawl-pulley, while its mate is being turned by its cord in the opposite direction. By closing toward each other the outer ends of the levers H H′ at one side of the seat the arc of vibration described by the said levers is shortened, and, consequently, so is the advance of the wheel of that side of the vehicle, whereby the rider can turn any curve he wishes. If desired, a third or trailing wheel may be pivoted by a reach to the frame-girt C′ to give the vehicle greater stability and steadiness in motion.

What I claim as my invention is—

In a velocipede, substantially as described, the combination of the oscillating chair, the pulleys, cords, and paws, with the ratchets on the axle-arms, whereby the latter may be rotated by the rocking motion of a rider in the chair, substantially as set forth.

FRANZ J. REINHOLD.

Witnesses:

H. F. EBERTS,

H. S. SPRAGUE.