L. KELLNER.

Velocipede.

No. 19,092, Patented Jan. 12, 1858.

Fig. 2.

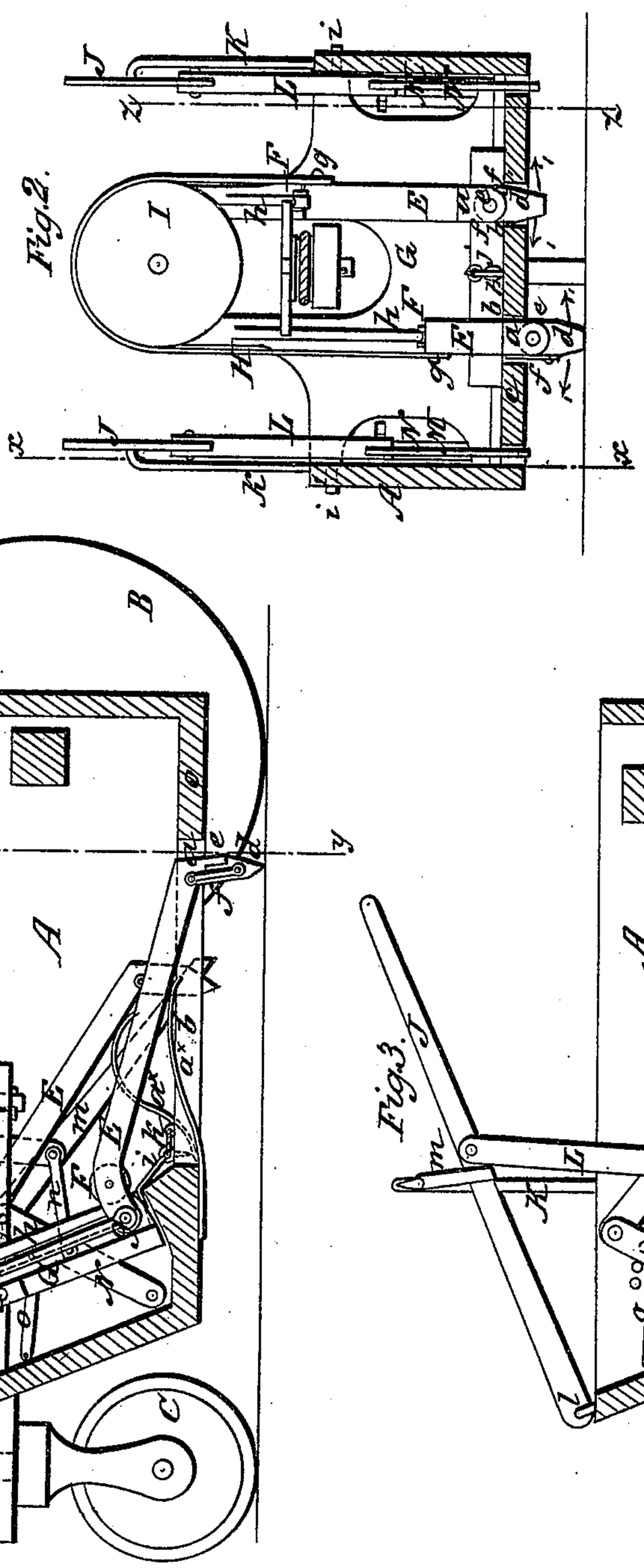

Fig. 1.

Fig. 3.

UNITED STATES PATENT OFFICE.

LOUIS KELLNER, OF BROOKLYN, NEW YORK.

VELOCIPEDE.

Specification of Letters Patent No. 19,092, dated January 12, 1858.

To all whom it may concern:

Be it known that I, LOUIS KELLNER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Velocipede; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement taken in the line (*x*), (*x*), Fig. 2. Fig. 2, is a transverse vertical section of ditto, taken in the line (*y*) (*y*) Fig. 1. Fig. 3, is a longitudinal vertical section of ditto, taken in the line (*z*), (*z*), Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the employment or use of treadles in connection with a bearing board so arranged and applied to a wheel vehicle that the occupant thereof may propel the vehicle along by operating the treadles and with a greater or less speed commensurate with the strength or physical capacity of the occupant.

The invention also consists in using in connection with the treadles aforesaid, levers so arranged as to serve when necessary as auxiliaries to the treadles when an increased propelling power is required.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a body of a vehicle the back part of which is supported by two wheels B, and the front part by a swivel wheel C.

D, is the seat at the back part of the body A.

E E, are two bars or treadles which are placed within the body A. The lower ends of these treadles have each a projection (*a*), attached, and these projections pass through slots (*b*) made longitudinally in the botom (*c*) of the vehicle. To each projection (*a*) a foot piece (*d*) is attached by a pivot (*e*) so as to form a joint. These joints allow the foot pieces to turn laterally as indicated by the arrows 1, Fig. 2, and the foot pieces, have a spring (*f*) attached to them one at each side, said springs serving to retain the foot pieces when not otherwise acted upon in line with the projections (*a*). The springs (*f*) may be of india rubber or other suitable elastic material. The upper ends of the treadles E, E, are slotted longitudinally for a short distance and a friction roller F, is fitted in each slot; a pin (*g*) also passes through the end of each treadle, the pins passing through slotted guides (*h*) (*h*) attached to a board G, which is pivoted or hung within the body A at (*i*) so that it may swing on said pivots and be adjusted at a greater or less angle with the vertical. The board may be secured at the desired inclination by means of a chain (*j*) attached to its lower part, and a pin or hook (*k*) attached to the botom (*c*) of the body A. The pins (*g*) secure the upper ends of the treadles to the guides (*h*) (*h*) and the rollers F, F, bear against the outer edges of the guides as shown in Fig. 1. The upper ends of the treadles E, E, are attached to the ends of a strap H, which passes around a pulley or wheel I, attached to the board G, or to supports connected therewith and each treadle E, rests on a spring (a^x) attached to the botom (*c*) of the body A.

To each side of the body A and at its front end a lever J, is attached as shown at (*l*). Each lever J, is connected by an india rubber or other suitable spring (*m*) to an upright K, the springs (*m*) having a tendency to keep the back ends of the levers J, elevated. To each lever J, an arm L is attached, and the lower ends of these arms are connected to levers M, the upper ends of which are jointed to one end of the levers N, the opposite ends of the levers N, being pivoted to the sides of the body A. By referring to Fig. 3 it will be seen that the two pairs of levers M, N, form toggles, and that the lower ends of the levers M, when the levers J, are depressed, will strike against the ground and the vehicle will be propelled or driven forward. The levers M, N, are connected by a spring (*n*) and a spring (*o*) is attached to each lever N, and to the body A. The springs (*m*) (*n*) have a tendency to draw up the levers M, N, and cause them to assume a proper position when the levers J, rise or are elevated.

The occupant is seated on the seat D, with a foot on each treadle E, the treadles being alternately depressed, the foot pieces (*d*) bear against the ground or earth while the upper ends bear against the board G, and the vehicle will consequently be propelled or driven along with a speed corresponding to the inclination of the

board G. The less inclination this board G, has, the slower the speed of the vehicle will be, for each treadle as it descends will propel the vehicle along a distance equal to that comprised by a horizontal plane extending from the lower end of the board G, to a vertical plane which will intersect the top end of said board G, and as this distance is diminished or increased by adjusting the board G, the speed of the vehicle and consequently the power necessary to propel it may be regulated as circumstances may require. By having the foot pieces (*d*) pivoted to the treadles E, as shown, they are allowed a certain degree of lateral movement to evade projections or obstructions that may lie in their path, and the springs ($a^{\times}$) serve to assist the upward movement of the treadles.

In ascending hills or in passing through sloughs the levers J, are operated by the hands, so as to give through the medium of the levers M, N, additional propelling power. These auxiliaries are almost if not quite indispensable, for their assistance will be often required and by their use the strength of the occupant of the vehicle will not at any time be overtaxed.

The swivel wheel C, may be arranged in any proper way so that it may be readily turned by the occupant on his seat.

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

1. The treadles E, E, connected by the strip H, or its equivalent and used in connection with the guides (*h*) and board G, arranged to operate as and for the purpose set forth.

2. I also claim the adjustable or yielding foot pieces (*d*) attached to the treadles E, E, substantially as herein described for the purpose set forth.

3. I further claim in connection with the treadles E, E, the auxiliary propelling devices formed of the levers J, J, M, M, N, N, arranged as described and for the purpose set forth.

LOUIS KELLNER.

Witnesses:
W. TUSCH,
W. HAUFF.