

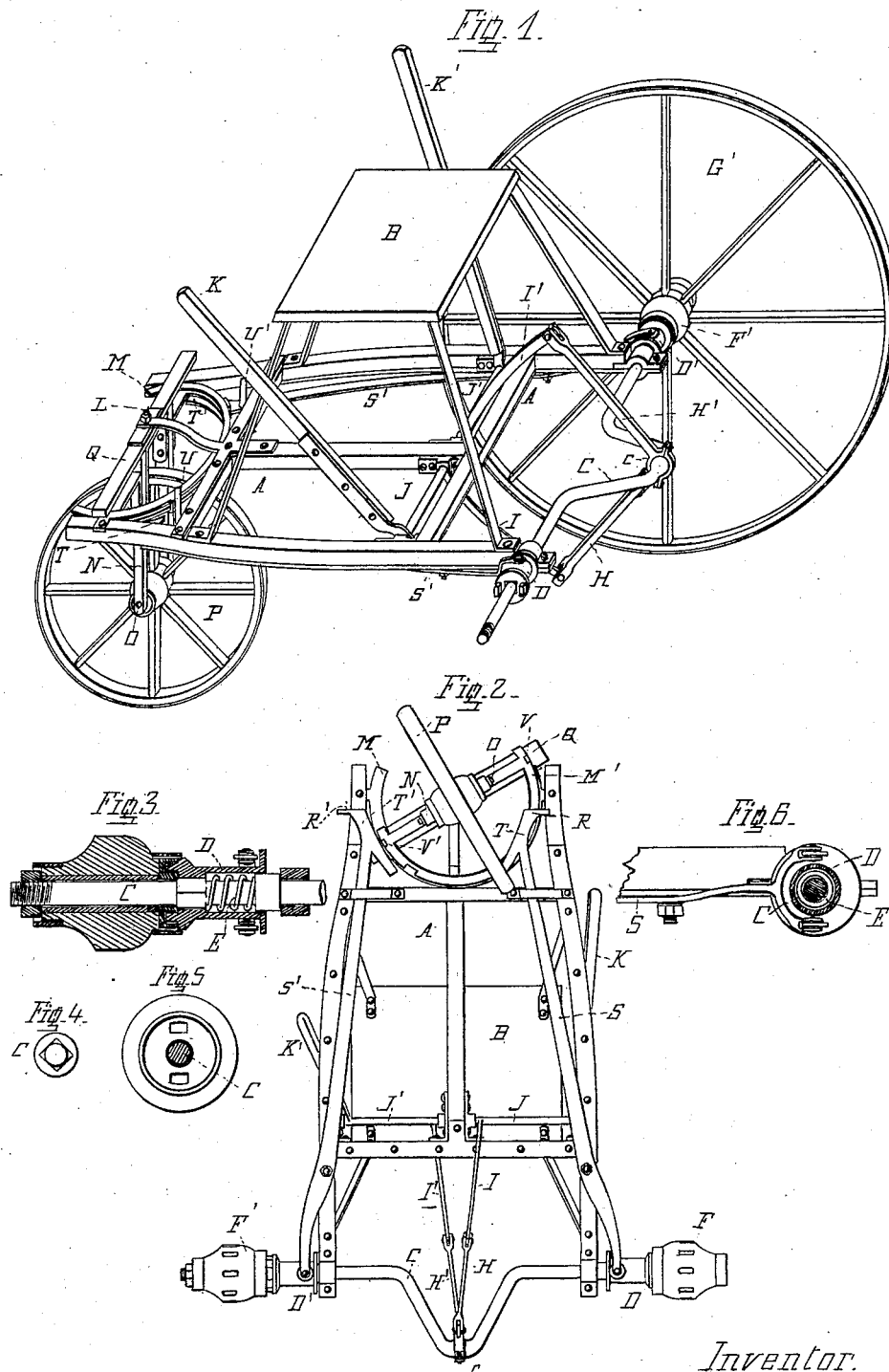
(No Model.)

H. C. BUDDENBERG.

VELOCIPÈDE.

No. 265,751.

Patented Oct. 10, 1882.



Attest
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UNITED STATES PATENT OFFICE.

HENRY C. BUDDENBERG, OF CINCINNATI, OHIO.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 265,751, dated October 10, 1882.

Application filed July 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BUDDENBERG, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Velocipedes, of which the following is a specification.

My invention relates to improvements in three-wheeled velocipedes or tricycles, by which the user may either hold the vehicle to a straight course or to any curve desired with very little expenditure of labor.

In the accompanying drawings, Figure 1 is a perspective view of a velocipede embodying my invention, the vehicle being shown in condition for moving straight forward or nearly straight forward, at the option of the user, one wheel being omitted. Fig. 2 is an under side view of the vehicle, the pilot-wheel being deflected and portions of the drive-wheels omitted. Fig. 3 is an axial section of one of the hubs with its clutch. Fig. 4 is an end view of the axle. Fig. 5 is a rear view of the hubs. Fig. 6 represents the rear end of one of the clutch-operating levers.

A is a frame constituting the carriage-perch, on which is erected a suitable seat, B, for the user. Journaled in the rear part of said perch is a crank-axle, C, whose ends carry sliding clutches D D', whose springs E E' cause said clutches to engage with the corresponding notched hubs, F F', of drive-wheels G G'. The crank c, at mid-length of axle C, connects by links H H' with arms I I', which extend rearward, one, I, obliquely downward, and the other, I', obliquely upward, from shafts J J' of levers or handles K K', accessible to the user. This arrangement of levers, shafts, arms, and links enables the alternate forward and backward vibration of the separate levers to overcome each other's "dead-points" and to operate continuously on a single crank, as shown. Secured to the front end of the perch by king-bolt L and a "fifth-wheel," M M', is the hanger N, in which is journaled axle O of pilot-wheel P. The hanger N has a cross-bar or treadle, Q, which enables the user to deflect the pilot-wheel (when liberated in the manner to be presently explained) to the right or to the left.

In the normal condition of the apparatus,

as shown in Fig. 1, the pilot-wheel, when not disturbed by the user, tends to revolve in a plane exactly parallel with those of the drive-wheels, being held to such parallelism by stops R R' on the forward extremities of levers S S', which impinge against lugs V V' on the hanger N, and which are held to the normal position shown in Fig. 1 and at R, Fig. 2, by the same springs, E E', which hold the clutches in lock. From absolute parallelism the said pilot-wheel P may be slightly deflected, in proportion to the amount of slack motion in the mechanism, by a pressure of the rider's right or left foot, as the case may be, against one or other end of the treadles Q. Such slight deflection is sufficient to correct any departure of the vehicle from its proper track or to conduct it along gentle curves, &c.

For sudden or sharp turns—such as required for taking a rectangular crossing or for reversing the direction of travel—provision is made as follows: From the square forward extremities, R R', of the levers the said levers take an oblique or latch-like form, as at T T', and the levers have upward projections U U', by which the rider can press either lever outward until the relief of either lug V or V' from its stop permits the hanger and pilot-wheel to be deflected backward on that side. The same movement of the lever unclutches the ground-wheel on that side and leaves it free to revolve at a slower rate than its mate, or to remain quiescent, or to even turn backward on the axle, so as to offer no opposition to the curving course of the vehicle. The proper deflection for the desired curve being thus obtained, the rider may remove his foot from the projection U or U', and the pilot-wheel will, for the time being, be held to the precise degree of deflection to which it has been brought by the pressure of the latch-formed portion of the clutch-lever against the hanger-lug on that side. The desired new direction having been thus obtained, the operator has only to restore the treadle to its normal position, when the clutch-lever will instantly spring back into position for direct travel, and will continue therein, thus relieving the rider of care and labor in maintaining the course.

I claim as new and of my invention—

1. In a velocipede or tricycle, the described arrangement of crank-axle C c, links H H',
armed shafts I J, I' J', and levers or handles
5 K K', for the purpose set forth.

2. The latch-formed levers S S', combined
at their front ends with the pilot-wheel stops
V V' and at their rear ends with spring-

clutches D E, D' E' of the drive-wheels, as and
for the purposes set forth.

In testimony of which invention I hereunto
set my hand.

HENRY C. BUDDENBERG.

Attest:

GEO. H. KNIGHT,

SAML. S. CARPENTER.