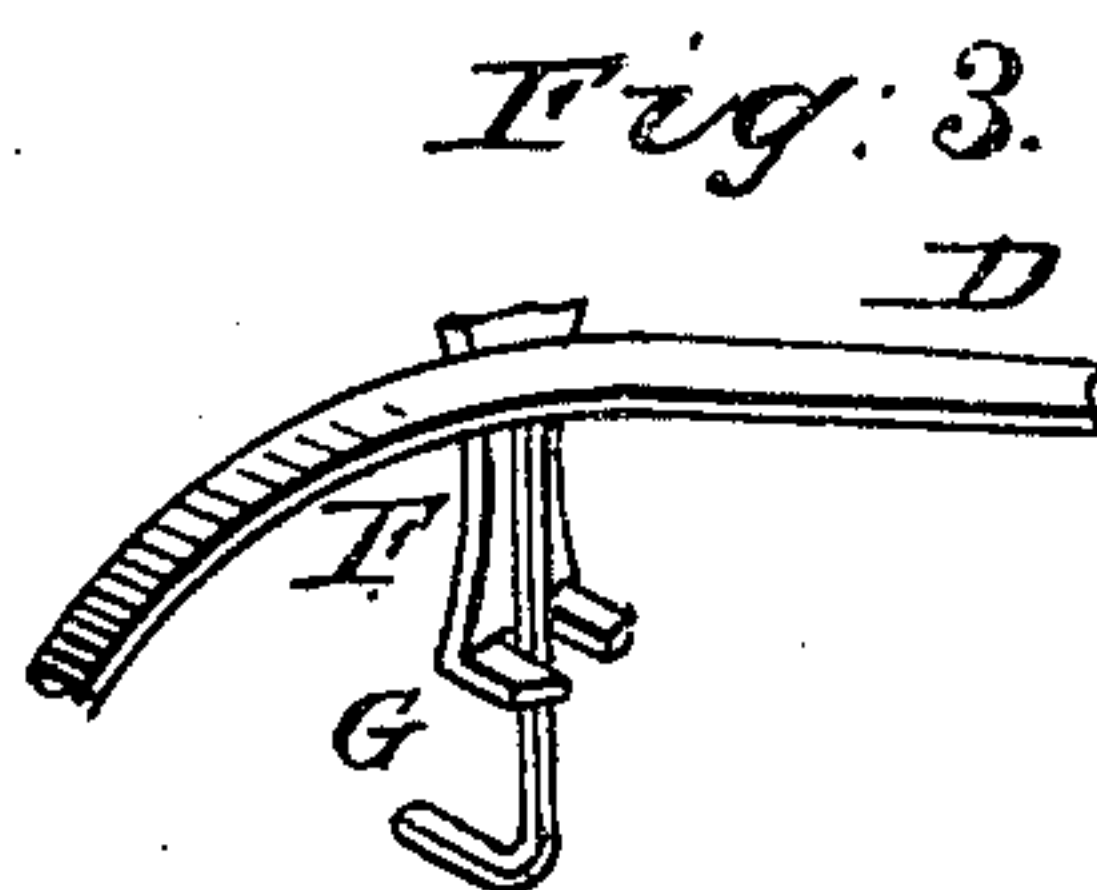
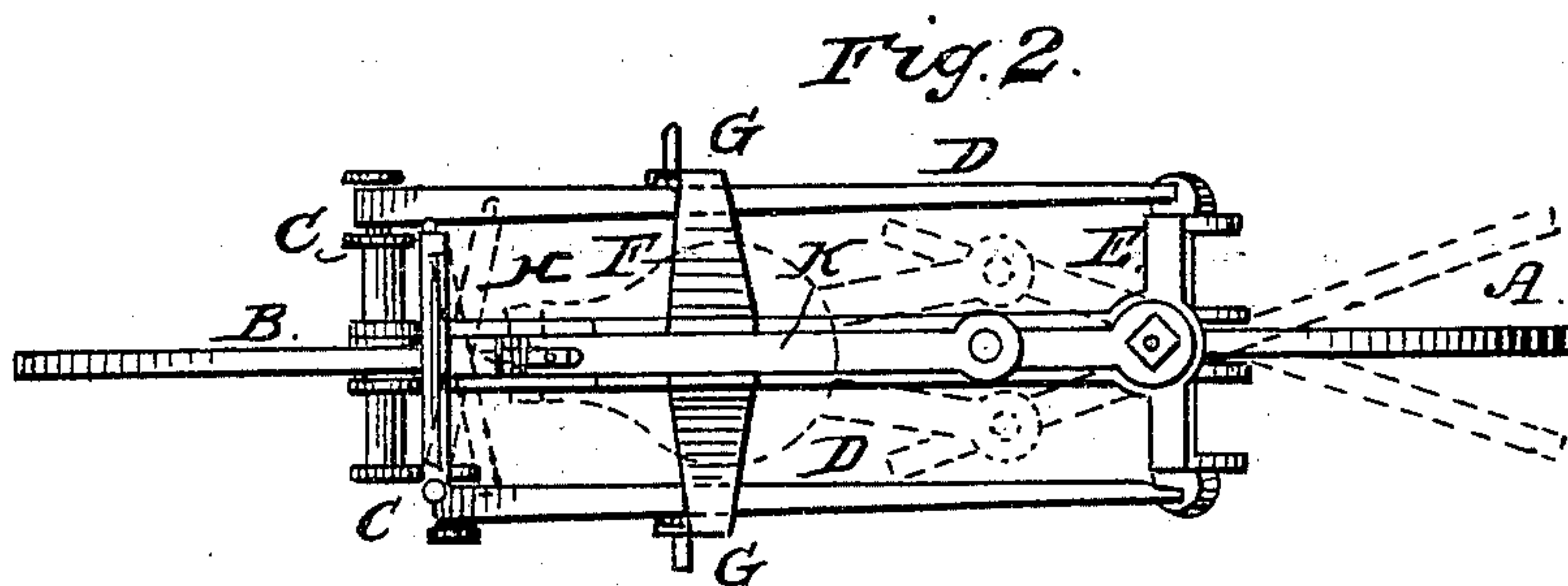
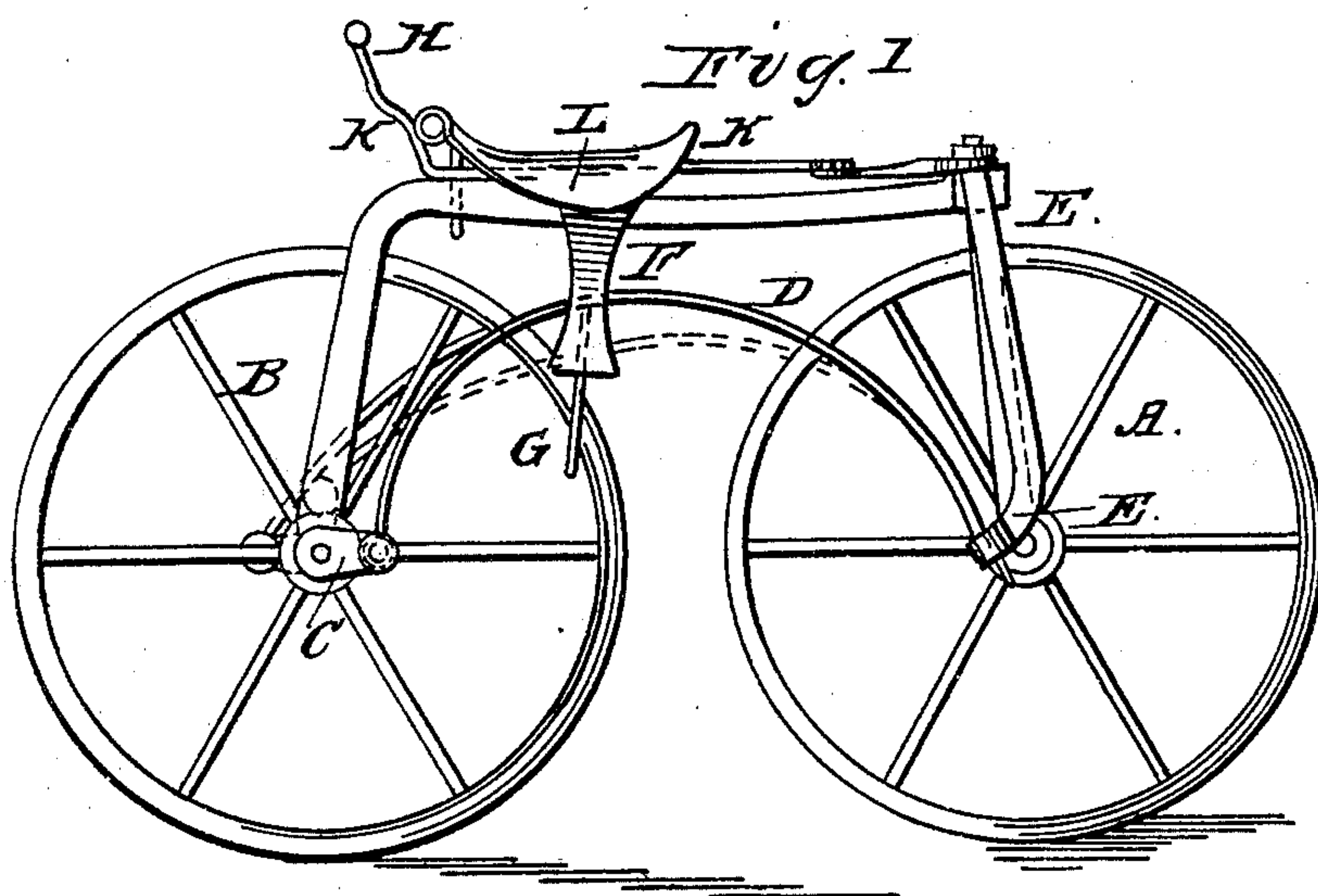


BALDWIN & MILLER.

Velocipede.

No. 90,220.

Patented May 18, 1869.



Witnesses
Alex. & C. Keanck
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Inventors
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United States Patent Office.

ARVIDE O. BALDWIN AND CHARLES H. MILLER, OF LINCOLN,
ILLINOIS.

Letters Patent No. 90,220, dated May 18, 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 we, ARVIDE O. BALDWIN and CHARLES H. MILLER, of Lincoln, in the county of Logan, and State of Illinois, have invented a new and useful Improvement in Velocipedes; and we do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the manufacture to which our invention appertains, to fully understand and construct the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a side elevation of a velocipede, with our invention applied to it;

Figure 2 is a plan of the spring, in which our invention consists, showing the stirrup, or treadle with which to work it, and the slotted rod, for gauging the working of the spring; and

Figure 3 is a plan of the guiding-lever, as attached to the rear, or guiding-wheel.

Like letters of reference indicate like parts in each of the figures.

The nature of our invention consists in the application of a spring or springs to a velocipede, extending from a fixed support at the rear wheel, to the cranks of the front wheel, on one or both sides, and being operated by a stirrup or stirrups attached to them, and working on, or by a guide-rod, which gauges the play of the spring to just sufficient movement to throw the crank around; and, also, in the application of the combined levers, for guiding a velocipede by the rear wheel.

In the drawings—

A represents the rear, and

B, the front wheel of a velocipede of common construction.

Extending from the fixed support E—which is an inverted U-shaped piece of iron, or any other suitable material, fitted at right angles with the connecting-

reach, and with it fitting on to the pivot of the guiding-post over the rear, or guiding-wheel A—to the crank C, on the front wheel B, is a curved flat spring, D, thickened, or rounded at the rear end, where it is fastened into the fixed support E.

F is a rod, or bar, to guide and gauge the working of the spring D, of suitable construction; and

G is the stirrup, or treadle, which is attached to the central part of the spring D, in a position to be easily reached and worked by the operator.

The guiding-handle H is attached to the lever K, which is a hinged lever, with hinge near the centre, extending from a pivot at or near the front of the saddle L, on which it is fixed, with a slot-shaped hole to give it play forward and back, in working the hinge to the guide-post over the hind wheel, which gives the guiding the same effect as though the guide-wheel were in front.

It will be easily understood, that when the person riding the velocipede has forced the crank downward with his foot, the action of the spring will complete the turn of the crank during that part of the turn when the foot does not exert any power on the crank.

We are aware that the application of a spring to carry a crank over the dead-centres, is not new, and this we do not claim; but

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

The arrangement of the springs D, with one end in the hangers E, and with the other attached to the cranks C, and provided with stirrup G, sliding in guide F, as described and shown.

ARVIDE O. BALDWIN.
CHARLES H. MILLER.

Witnesses:

DAVID H. HARTS,
E. WRIGHT.