

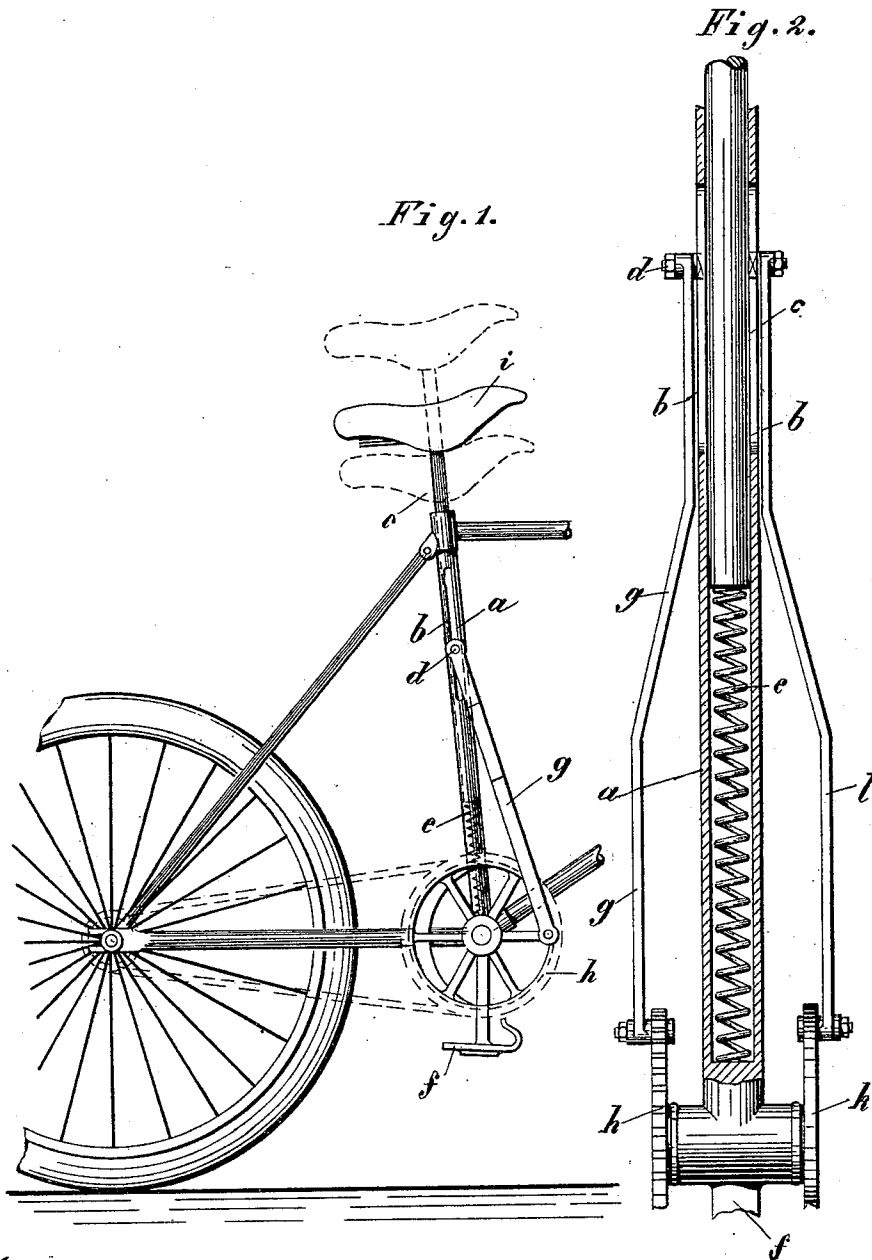
No. 642,758.

Patented Feb. 6, 1900.

J. F. A. RUNGE.
BICYCLE.

(Application filed Feb. 18, 1898.)

(No Model.)



Witness
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UNITED STATES PATENT OFFICE.

JULIUS FRIEDRICH ALFRED RUNGE, OF LEIPSIC, GERMANY.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 642,758, dated February 6, 1900.

Application filed February 18, 1898. Serial No. 670,777. (No model.)

To all whom it may concern:

Be it known that I, JULIUS FRIEDRICH ALFRED RUNGE, a subject of the King of Saxony, residing at Leipsic, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Bicycle Movements, (for which I have applied for patents in Germany, dated January 14, 1898; in Austria, dated January 15, 1898; in Hungary, dated January 19, 1898, No. 840; in Sweden, dated January 15, 1898, No. 69; in Norway, dated January 19, 1898, No. 9,375; in Denmark, dated January 14, 1898, No. 48; in France, dated January 20, 1898, No. 261,995; in Belgium, dated January 20, 1898, No. 103,846, and in Switzerland, dated January 15, 1898, No. 17,481,) of which the following is a specification.

The object of the present application is a movement for bicycles. This movement is brought about neither by pedaling nor by a pushing or turning movement, but by an up-and-down movement of the seat, as in riding.

The method of execution is illustrated in the drawings.

Figure 1 is a side view of the new movement, and Fig. 2 is a section of the same on an enlarged scale.

As is shown in the drawings, the seat-pillar tube is provided with slots *b*. The seat-pillar *c* moves easily and works in the seat-pillar tube *a*, while the upward movement which the spiral spring *e* imparts to it is checked by the strong bolt *d*, which passes through the slots *b*. Foot-rests *f*, applied to the frame, yield a support to the feet, while a sliding bar

g brings a connection between the saddle-pillar guide-bolt *d* and the chain-wheel *h*. To equalize the pressure on the hub, a wheel *k*, corresponding to the chain-wheel, and a second sliding bar *l* can be provided, Fig. 2. The method of working is as follows:

The rider sets the machine in motion with a push and swings himself into the saddle. He places his feet in the immovable fixed rests *f* and seats himself on the saddle *i*. Then he presses this down and by means of the bar *g*, attached to the seat-pillar *c*, makes the chain-wheel *h* revolve, by which the back wheel is set in motion by chain transmission.

The movement can of course be applied directly to the back wheel or indirectly by means of rack and pinion or friction-wheels.

What I claim, and desire to secure by Letters Patent of the United States, is—

In a bicycle a hollow stationary tube *a*, suitably secured to connections with the frame and provided with a slot *b*, to receive the bolt *d* and a seat-bar *c*, having a vertical movement in said tube, in combination with the spring *e*, for imparting an upward movement to the seat-bar, and a connecting-rod pivoted at its upper end to the bolt *d*, and at its lower end to connections for imparting rotating movement to the rear wheel of the bicycle.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

JULIUS FRIEDRICH ALFRED RUNGE.

Witnesses:

CURT TEICHER,
RUDOLPH FRICKE.