

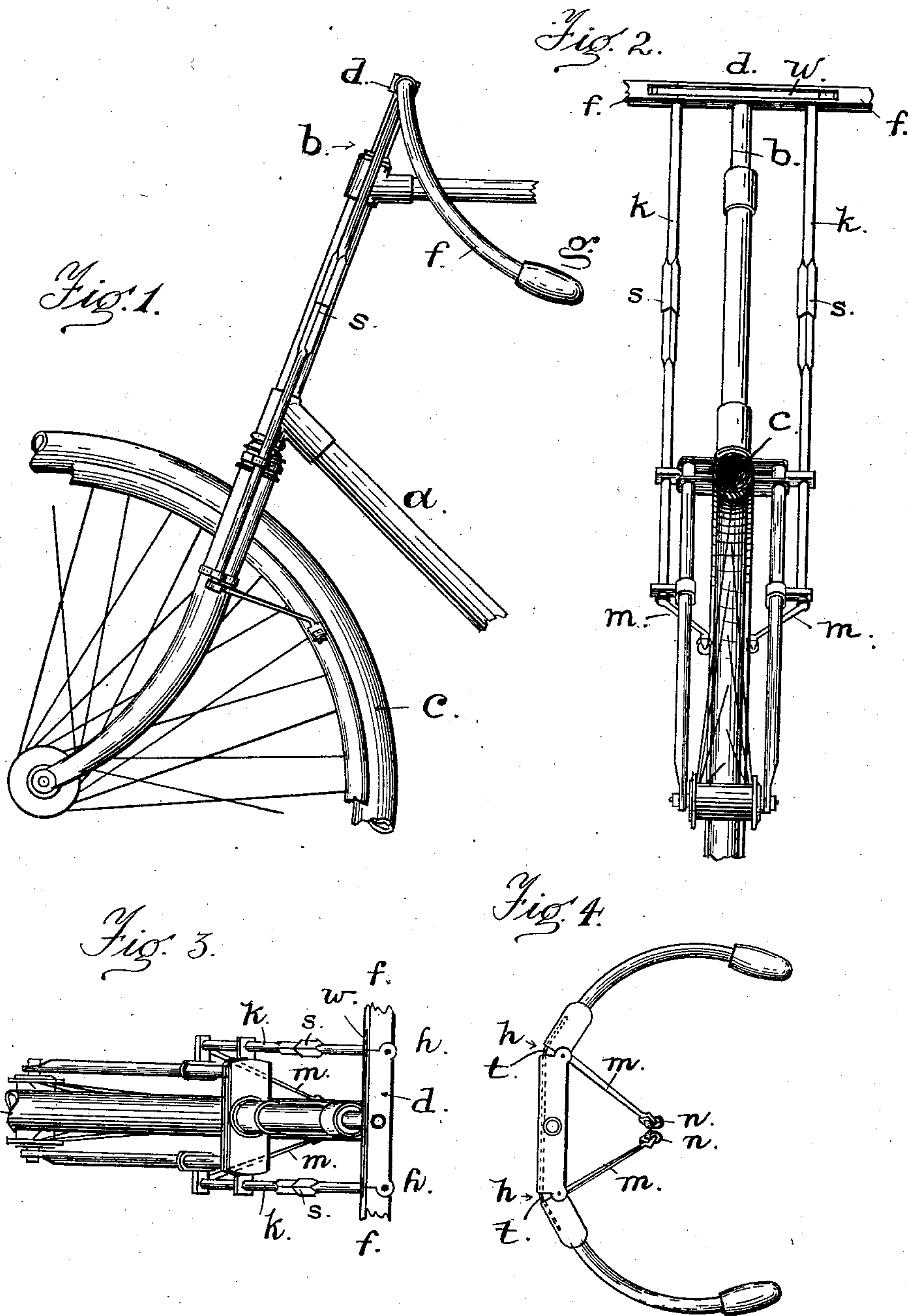
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Patented Sept. 2, 1902.

G. STABILE.
BICYCLE BRAKE.

(Application filed Apr. 14, 1902.)

(No Model.)



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BICYCLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 708,089, dated September 2, 1902.

Application filed April 14, 1902. Serial No. 102,779. (No model.)

To all whom it may concern:

Be it known that I, GIOACCHINO STABILE, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have invented a new and useful Improvement in Bicycle-Brakes, of which the following is a specification.

This invention relates to improvements made in bicycle-brakes of that class or description which are controlled by the rider from the handle-bars; and the invention comprises an improved construction and novel combination of jointed handle-bars, brake-arms adapted to grip the steering-wheel, and rock-shafts or rods constituting rigid connections between the jointed members of the handle-bars and the brake-arms.

The object sought to be attained by these improvements is to make the handle-bars serve the double purpose of steering and of controlling the wheel and of operating the brake, thereby dispensing with a separate lever or handle to work the brake, of enabling the rider to apply the brake and to throw it off at pleasure without removing either hand from the handle-bars.

The nature of the said improvements and the manner in which I proceed to produce, apply, and carry out the same are explained at length in the following description, in which reference is had to the accompanying drawings, forming part of this specification.

Figure 1 of the drawings represents in side elevation the front fork and steering-head and a portion of the steering-wheel of a bicycle, showing my improved brake applied to it. Fig. 2 is a front elevation taken from the left of Fig. 1. Fig. 3 is a top view of Fig. 1; and Fig. 4 is a top view of the jointed handle-bars, showing the relative position of the fixed and the movable members when the brake is on.

The frame *a*, steering-head *b*, and wheel *c*, portions of which are shown in the foregoing views, are of the usual construction. The handle-bars consist of a middle member or section *d*, herein termed the "cross-head," and outer members *f f*, provided with grips or handle portions *g*. The outer sections or members are connected together at the ends

by joints *h h* of such character that the outer members *f* have a limited angular movement by pressing the handles toward each other, but will be rigid with the middle member under pressure applied to the handles in the opposite direction. At the hinge joining each outer member to the middle member a rod *k*, extending downward alongside of and parallel with the post and the front fork, is rigidly connected at the upper end to the hinged member, so as to turn axially with that member, and from the lower end of the rod *k* an arm *m* at right angles thereto extends rearward and inward toward the rim of the wheel. On the end of the arm is a small roller *n* to engage the wheel-rim when the rod is so turned. The rods *k* are supported in line with the centers of the hinges on which the two swinging members *f* turn and are also kept parallel with the steering-post. If the steering-post is constructed with an extension-joint for adjusting the height of the handle-bars to suit the rider, the rods *k* are made in two parts united by telescopic joints *s*, so as to be lengthened or shortened to agree with the variations made in the length of the steering-post as the handle-bars are raised or lowered. Under the ordinary movements of the handle-bars in steering the bicycle the three sections are held stiffly together by a flat spring *t*, extending across each joint-opening and confined in a groove or recess *w* in the front or outer face of the middle section and the adjacent end of the handle-bearing section, the spring being so arranged that the angular movement of the handle-section on the spring will yield and allow the handle to turn the rock-shaft; but until sufficient power is applied to the handle-bar in the proper direction the outer members will be rigid with the cross-head and readily act on that part to turn the head to the right or left. The weight thrown by the rider upon the handle-bars in guiding and controlling the wheel keeps the sections rigid at the joints and in line to properly turn the post, so that the function of the springs is mainly to keep the sections in line when the hands are taken off the handle-bars and to bring the members back to position as soon as the pressure of the hands

is removed after an angular movement of the outer members.

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

1. A steering-head for a bicycle comprising a middle section constituting a rigid member of the steering-post, outer sections connected to the middle section at opposite ends by hinge-joints, said outer sections having limited angular movement of their hinge-joints toward each other in one direction under an inward pressure, but to be rigid and in line with the middle section under pressure applied in the opposite direction, and means connected with said hinged sections operating under the angular movement thereof in one direction to grip the rim of the wheel from opposite sides, and to release the wheel by their movement in the contrary direction.

2. In a bicycle-brake, a steering-head comprising a rotatable post having a cross-head fixed on the upper end, handle-bearing outer members attached to the outer ends of the

cross-head by hinge-joints, said handle-bearing members having limited angular movement only in one direction and rigid under pressure applied to the handles in all other directions; in combination with brake-arms having angular movements with respect to the rim of the steering-wheel and adapted to grip the wheel from opposite sides of the rim, and means rigidly connecting said brake-arms with the handle-bearing members, whereby the angular movements of the handle-bars produce corresponding angular movements of the brake-arms to close the latter upon the wheel, and a spring at the joint of each handle-bearing member adapted to bring said member to position when pressure is removed therefrom and throw off the brake-arms.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

GIOACCHINO STABILE.

Witnesses:

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