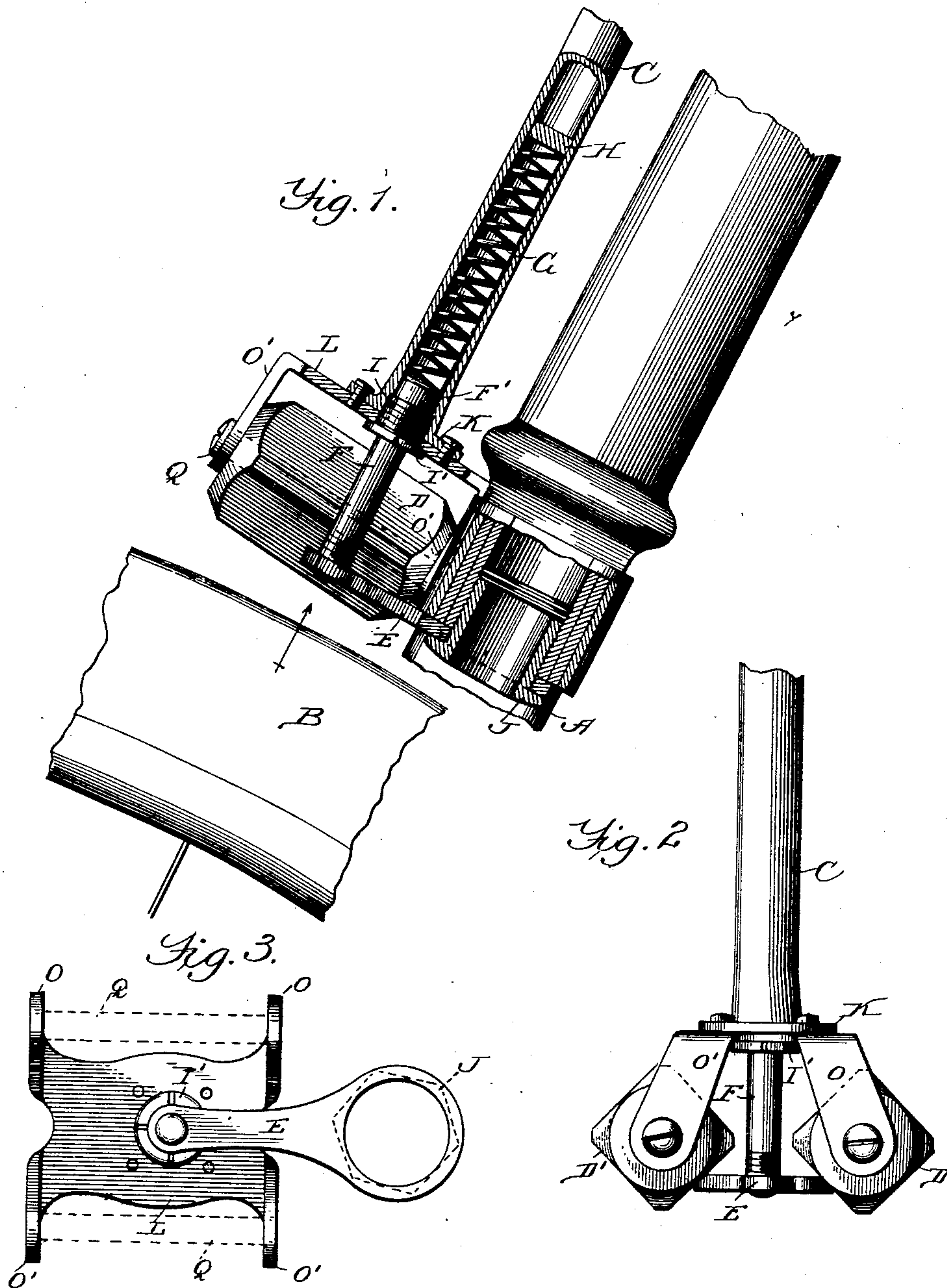


(No Model.)

J. L. SACKETT.  
BICYCLE BRAKE.

No. 587,611.

Patented Aug. 3, 1897.



WITNESSES:

*Henry S. Arthur.*  
*Henry Burton.*

INVENTOR

*Jasper L. Sackett*

BY

*Wiles & Greene,*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JASPER L. SACKETT, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR TO THE LAMB MANUFACTURING COMPANY, OF CHICOPEE FALLS, MASSACHUSETTS.

## BICYCLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 587,611, dated August 3, 1897.

Application filed December 3, 1896. Serial No. 614,286. (No model.)

*To all whom it may concern:*

Be it known that I, JASPER L. SACKETT, a citizen of the United States, residing at Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Bicycle-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The brake is of the class known as "front plunger-brakes"—that is, such as operate upon the front wheel and move bodily toward and away from the same, being actuated in the usual way by devices alongside the handle-bar.

In the drawings, which show only such parts as aid in setting forth the construction, attachment, and operation of the novel devices, Figure 1 is a side elevation, partly in axial vertical section, showing the brake in its normal raised position. Fig. 2 is a front view of the same devices. Fig. 3 shows the same devices seen in the direction of the arrow of Fig. 1.

In all the figures where the letters appear, A represents an ordinary front fork of a bicycle, B the front wheel, and C a tubular brake-rod bearing at its lower end two square or prismatic blocks D D', of rubber, each approximately parallel to a tangent to the wheel at the nearest point of the latter. The two blocks lie upon opposite sides of the medial plane of the wheel and have their tire-meeting faces normally parallel to planes tangent to the tire at the points where the two blocks meet the latter when the brake is forced downward into contact with it.

From the lower side of the fork-crown a rigid arm E extends forward between the blocks a little above the tire, and into the forward end of the arm is screwed an upwardly-projecting post or rod F, parallel to the axis of the steering-head and provided at its free end with an enlargement or head which fits, piston-like, in the bore of the brake-rod. Within the latter a coiled spring G lies between the head F' and a stop H, fixed in the tube, and offers yielding resistance to the depression of the latter. In the lower

end of the tubular rod is screwed a sleeve I, which fits the post F and, with the head F', serves to keep the tube in perfect alinement with the post. To facilitate the insertion and removal of the sleeve, it is provided with a flange-head I', transversely slotted to receive a screw-driver. The arm E is rigidly but detachably fixed to the fork by means of a tubular bolt J, passing through its perforated rear end into that portion of the fork which lies just above it. At its lower end the brake-rod is provided with a plane integral annular flange K, inclined to the axis of the rod, and to this is rigidly fixed a plate L, having forked front and rear ends, both bent downward into planes parallel to the rod's axis, or nearly so. Between corresponding branches O O' of the forks the rubber blocks D D' are mounted upon axial bolts Q, which preferably draw the branches together, so as to produce enough friction to prevent accidental rotation of the blocks upon the bolts, but not enough to offer serious resistance to their forcible rotation.

The arm E, which lies between the branches of the rear fork, is so far below the plate L that the latter never strikes it when the brake descends, and the height of the plate when raised—that is, the distance of the brake from the tire—may be varied by adjusting the post F in the arm which supports it.

It is obvious that if the brake-rod be forced downward the spring will be compressed until the rubber blocks meet the tire, and that since the latter may rotate they will adjust themselves to the surface which they meet and form a perfectly-fitting V-shaped shoe, compressing the tire both laterally and vertically, but only along lines upon each side of the middle of the tread. When the downward force upon the brake-rod ceases to act, the brake is instantly raised by the reaction of the spring, and this result follows with more certainty than in many plunger-brakes, for the reason that the powerful forward traction of the wheel upon the brake when the latter is vigorously applied can neither spring the rod nor distort its bearings. This result arises from the fact that when the shoe is fully depressed, as in using great braking force, the plate L is brought down very near



the arm E and the pull is almost in line with that arm, and hence lacks the usual leverage upon the rod.

The blocks being of rubber, and consequently not slipping easily upon the tire, and the tire being in effect wedged between them, a slight force has a great retarding effect, and this is of importance where it is necessary to keep the brake applied constantly for a considerable time—as, for example, in descending a long hill, where the hand would otherwise become seriously tired; but although it is effective the minimum amount of injury to the tire results; because the rubber is yielding and cannot in any case cut the tire or rigidly hold sand or grit, so as to needlessly injure it; and practically, since the shoe bears only at the sides of the part receiving the greatest wear from the road, the brake may be used freely without danger of shortening the life of the tire. With all these advantages the brake is light, its parts are readily separable for repair, and it is easily attached to any wheel, and when detached it leaves no visible traces of its use if proper devices be used for attaching the brake-lever.

What I claim is—

1. The combination with a tubular brake-

rod, of a suitable brake-shoe secured to the lower end of said rod, a rod-guiding post extending from below into the lower end of said rod, and a rigid arm secured to the lower projecting portion of said post and adapted to be attached rigidly to the frame of a bicycle. 30

2. The combination with a tubular brake-rod, of a two-part brake-shoe adapted to press the tire upon each side of its medial line, of an arm lying between the two parts of the shoe and adapted for rigid attachment to the front fork, and a post fixed to the end of said arm and extending into the tubular rod, for the purpose set forth. 35 40

3. The combination with the tubular brake-rod, of the coiled spring within the same, the spring-supporting post projecting from the end of the rod, the post-supporting arm secured to the post, the forked plate fixed to the lower end of the brake-rod, and the rotatable rubber blocks carried by the plate and lying upon opposite sides of said post. 45 50

In testimony whereof I affix my signature in presence of two witnesses.

JASPER L. SACKETT.

Witnesses:

CHAS. C. CANDY,  
HOWARD L. HOLT.