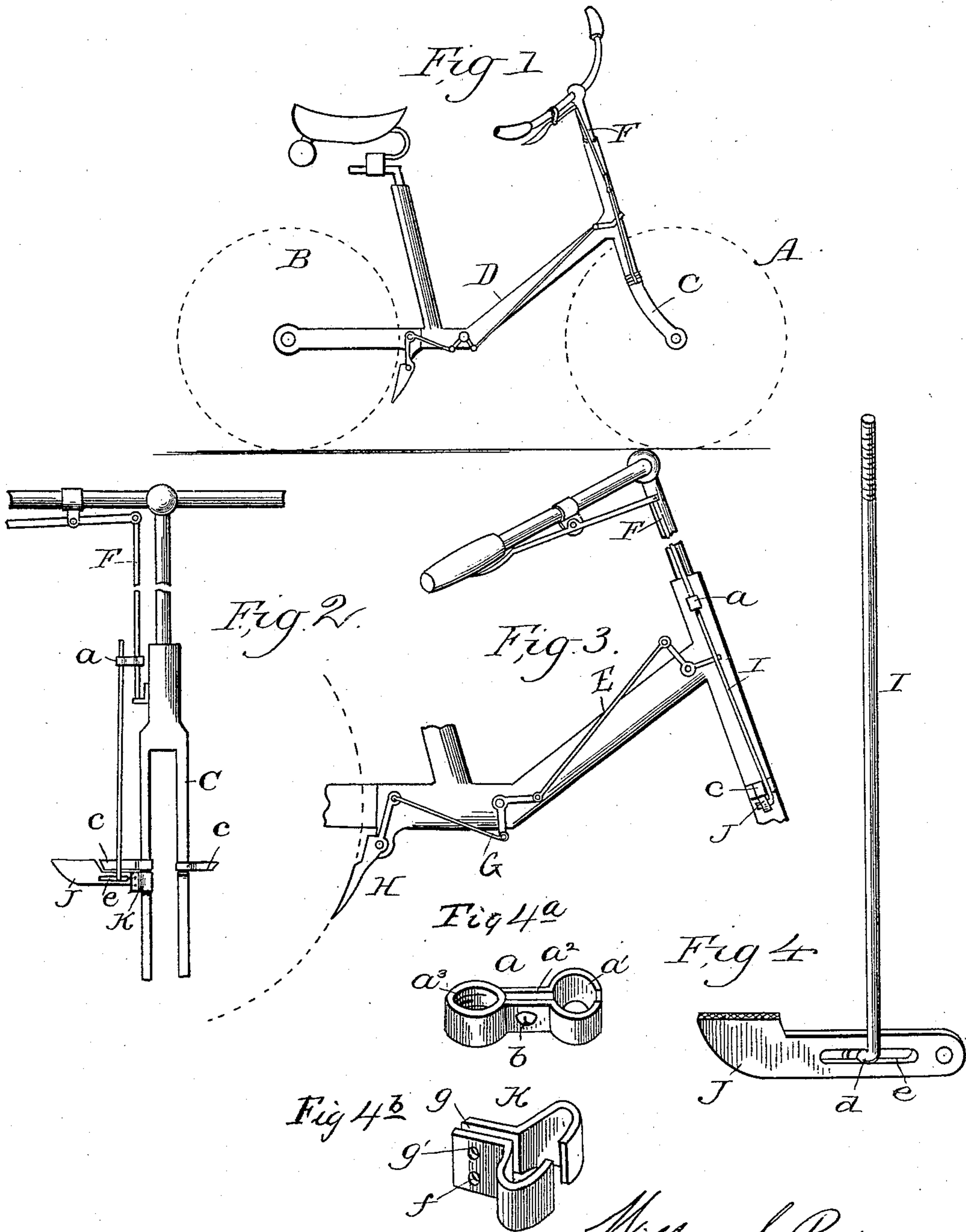


(No Model.)

W. S. PORTER.
ATTACHMENT FOR THE BRAKES OF BICYCLES.

No. 486,683.

Patented Nov. 22, 1892.



WITNESSES:

J. M. Reynolds
H. K. Ellis

William S. Porter
INVENTOR

BY *E. Everett Ellis*
his ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM S. PORTER, OF WASHINGTON, PENNSYLVANIA.

ATTACHMENT FOR THE BRAKES OF BICYCLES.

SPECIFICATION forming part of Letters Patent No. 486,683, dated November 22, 1892.

Application filed June 9, 1892. Serial No. 436,096. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. PORTER, a citizen of the United States, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for the Brakes of Bicycles; 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.

This invention relates to certain new and useful improvements in attachments to bicycle-brakes; and it consists, substantially, in such features of arrangement, construction, and combinations of parts, as will hereinafter be more particularly described and claimed.

The object of the invention is to provide a simple and effective foot attachment for the ordinary hand-brakes of bicycles, so as to enable increased power to be applied, substantially as will hereinafter be more particularly explained.

Figure 1 represents a view in perspective of a bicycle having my improvements embodied in connection therewith. Fig. 2 is a front elevation of the machine, also having my improvements embodied in connection therewith and showing the several parts of the brake attachment more enlarged. Fig. 3 is a side elevation representing my improved attachment in use on the machine, as when, for instance, power is applied to the brake. Figs. 4, 4^a, and 4^b are enlarged views, in detail, representing in regular order the several parts which constitute my improved attachment, the said view indicating more clearly the general construction of each part.

My improved attachment is intended more particularly for use in connection with rear-brake machines, although with but slight variation in arrangement it may be applied with equal effect on machines having front-brake mechanism.

In the practice of the invention I attach to the lower end of the vertical rod, which is actuated by the hand-rod, a suitable pendent rod, which extends down to a point about in line with the usual foot-rest or step on the front wheel-fork, and this pendent rod is both movably and adjustably connected to the usual vertical rod first named to be lengthened or

shortened with respect thereto, so as to be regulated as to length, and also thereby vary the degree of friction or power exerted by the brake-shoe upon the wheel. The said pendent rod is in movable connection at its lower end with a pivoted foot-lever which has its bearings in a clamp which fits around the front fork on one side, and the effect of the whole construction and arrangement is that by applying the foot to the foot-lever, as well as the hand to the hand lever or rod, a double or increased power is exerted upon the brake-shoe with the natural effect of preventing any slipping back of the wheels and also of preventing many accidents and calamities heretofore incident to many forms of brake mechanisms in use.

Reference being had to the several parts of the drawings by the letters marked thereon, A represents the front wheel of an ordinary bicycle; B, the rear wheel; C, the steering-fork, and D the backbone.

The letters E, F, G, and H represent one form of rear-brake mechanisms in common use upon bicycles, and it is in connection with such form that I have shown my improved attachment. Secured or connected to the rod F at or near its lower end in a removable manner is a clamp *a*, the said clamp being shaped at *a'* to slip upon the said rod F, and also being split at *a''*, so as to be made to grasp said rod more or less tightly, according to the degree of tightness to which the adjusting and fastening screw *b* is set. The said clamp *a* is further constructed with a ring-shaped portion *a'''*, which is screw-threaded on its interior surface, and which portion *a'''* receives and holds in an adjustable manner the upper end of a pendent rod I, the said upper end of said rod being likewise screw-threaded for a suitable distance to be received and held by the screw-threaded ring-shaped portion *a'''* of the clamp *a*. The said pendent rod I extends down for a suitable distance—say to a point about in line with one of the usual foot-rests or steps *c*—and at its lower end it is bent or turned, as shown at *d*, so as to enter the slot *e* of a pivoted foot-lever J, which is so shaped as to receive the foot easily and conveniently. Instead of bending or turning the lower end of said rod I, so as to enter the slot of the foot-lever, the connection could be easily made by

a separate bolt or link, movably uniting said rod and foot-lever by the use of nuts to properly secure the connection and maintain the same. The purpose of having the slot in the foot-lever is for enabling the lower end of rod I to be adjusted in or out, and thus lengthen or shorten the degree of movement of said rod when power is applied to the lever by the foot. The said foot-lever is pivoted in a clamp K, which fits around one tine or member of the steering-fork, as shown, the said clamp being constructed of spring metal, so as to be tightened more or less around the fork, according to the degree of tightness to which the adjusting-screw *f* is set, such screw being passed through the clamp, as shown, so as to hold the same in place and enable adjustment thereof on the fork, as it may be the wish to raise or lower the clamp. That portion of the clamp through which the said adjusting-screw *f* passes is split vertically for a short distance, as seen at *g*, so as to enable free movement or oscillation of the foot-lever, and it is also provided with an opening *g'* for passage of the pivot or screw which holds said lever. Beneath the opening *g'* is a similar opening for the passage of the adjusting-screw. This clamp is also of spring sheet metal and can be easily and quickly applied in place.

From the foregoing description it will be

seen that by the use of my improved attachment a greater amount of power is exerted upon the brake-shoe. Consequently a greater effect is produced upon the wheels of the machine. It will further be seen that the attachment is very simple, cheap to manufacture, and not likely to get out of order while in use. The many other advantages are so apparent that it is unnecessary to particularly specify them further.

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

In a brake attachment for bicycles, the combination, with the ordinary brake mechanism, of a clamp attached to the ordinary vertical brake-rod, a supplemental or pendent rod screw-threaded at its upper end and adjustable in said clamp, a clamp fitting around one of the members or tines of the steering-fork and adjustable thereon, and a foot-lever pivoted to said clamp and provided with a slot or oblong opening in which the lower end of the pendent rod is adjustably secured, substantially as described.

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

WILLIAM S. PORTER.

Witnesses:

D. T. WADE,
M. C. TREAT.