(No Model.)

W. METZRATH.

BICYCLE SUPPORT.

No. 606,487. Patented June 28, 1898.

Fig. 1.

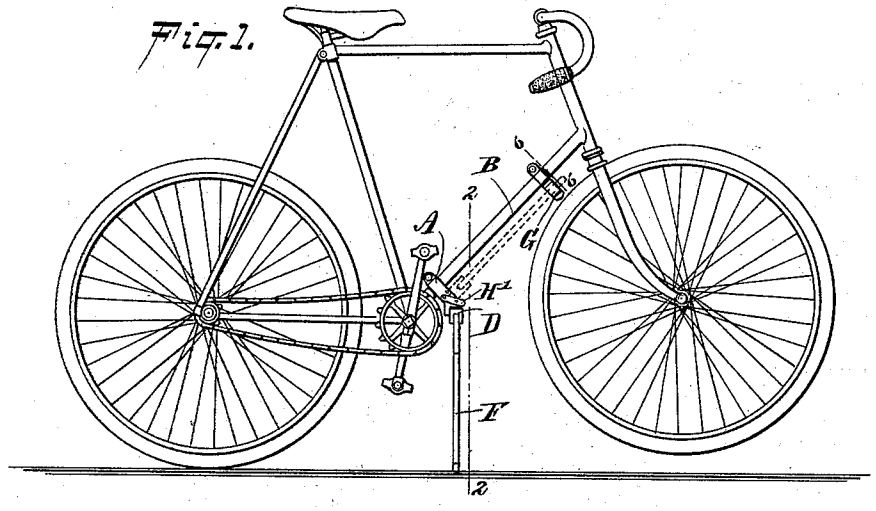


Fig. 3.

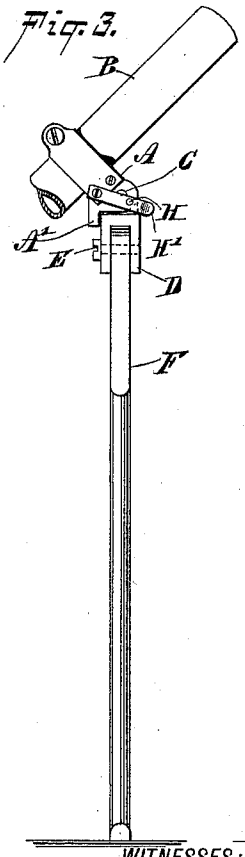


Fig. 2.

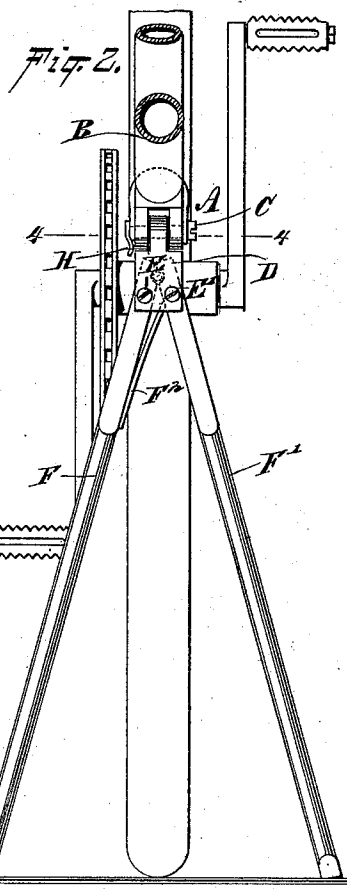


Fig. 4.

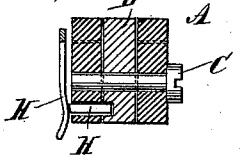


Fig. 5.

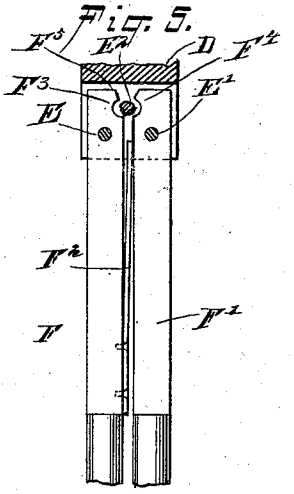
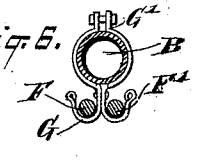


Fig. 6.



WITNESSES:

William P. Goebel.

Rud. J. Hoster.

INVENTOR

W. Metzrath.

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM METZRATH, OF HIGHLAND PARK, NEW JERSEY.

BICYCLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 606,487, dated June 28, 1898.

Application filed June 2, 1896. Serial No. 593,980. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM METZRATH, of Highland Park, in the county of Middlesex and State of New Jersey, have invented a new and Improved Bicycle-Support, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved bicycle-support which is simple and durable in construction, readily applied to and carried on the bicycle, and arranged for instant use to firmly support the machine and at a standstill.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is an enlarged transverse section of the same on the line 2 2 of Fig. 1. Fig. 3 is an enlarged side elevation of the same. Fig. 4 is a sectional plan view of part of the improvement on the line 4 4 of Fig. 2. Fig. 5 is a cross-section of the head with the supporting-rods in a closed position, and Fig. 6 is an enlarged cross-section of the fastening device on the line 6 6 of Fig. 1.

The improved bicycle-support is provided with a clip A, adapted to be fastened to the lower front brace B of the bicycle-frame, as plainly illustrated in Fig. 1, the said clip being located near the lower end of the brace in close proximity to the bearing for the pedal-shaft.

The lower or rigid portion of the clip has a central vertical slot opening downward, and in such slot the swinging head D is pivoted by a transverse pin C. The head D has a transverse open slot, in which the supporting rods or legs F F′ are pivoted on pins E and E′ at separate but directly opposite points, so that they may swing laterally, but in no other direction. When the head D is swung into a vertical position and the rods F F′ are opened out, as shown in Fig. 2, then the said rods reach to the ground to hold the front wheel of the bicycle above the ground, as indicated in Fig. 1. The bicycle is thus supported on its rear end wheel and by the two rods F F′. The latter are held in an open position by a spring F^2, secured at one end to one of the rods and pressing with its free end on the other rod, as plainly indicated in Fig. 5.

In order to hold the lower ends of the rods F and F′ equidistant from the longitudinal vertical central plane of the bicycle and to limit their outward swinging motion, I form the pivot ends of the said rods with recesses F^3 and F^4, respectively adapted to engage opposite sides of a pin E^2, held in the head D, as plainly shown in Fig. 5. The said recesses terminate at their upper ends in bevels F^5, adapted to abut one on the other to form a firm support by the rods when the latter are distended or braced apart, as shown in Fig. 2. By this construction I avoid a lateral projection or shoulder on the rods and also provide a stronger brace for the rods than is otherwise practicable.

As will be seen, Figs. 2 and 5, the pin E^2 passes transversely through the transverse slot in head D and is above, but equidistant from, the pivot-pins E E′ of the rods F F′, so that they are limited equally in their outward swing by means of a single stop device. Further, by providing separate pivots for the said rods it is unnecessary to reduce their thickness and lap one on the other, as in case a single pivot were employed, and hence the rods are not weakened at the joint. The stop-pin E^2 is, however, subjected to but little strain by lateral leverage of the rods F F′, since this is borne mainly by the pivot-pins E E′ in consequence of the beveled ends of the rods abutting, as shown.

When the device is not in use, the head D is swung upward into the position shown in dotted lines in Fig. 1, and the rods F and F′ are then closed by the operator pressing the said rods toward each other against the tension of the spring F^2. The two rods can then be engaged at their free ends with spring-arms G, formed integral with or connected to a clip G′, secured to the upper part of the front brace B, as shown in Figs. 1 and 6.

The spring-arms G are shaped in such a manner that they permit a ready entrance of the two rods when in a closed position, and then when the operator releases the said rods the spring F^2 forces the same apart into bear-

ings or rests formed in the spring-arms, as plainly shown in Fig. 6. Thus the two rods F and F′ are securely held in position under the brace B while the wheel is in use.

In order to prevent the head D from swinging too far backward when using the device, I provide the clip A with a shoulder A′, adapted to be engaged by the head, as plainly shown in Fig. 3. In order to lock the head in this position, I provide a pin H, secured on the free end of a spring H′, fastened to the clip A, as shown in Fig. 3. (See also Fig. 4.)

The pin is fitted to slide in the head D and is adapted to engage with its inner end a recess in the eye D′, so as to lock the head D firmly in place on the clip A during the time the said head and rods F F′ are in a lowermost or active position.

When the device is to be moved out of use, as above described, then the operator first presses the free end of the spring H′ outwardly to move the inner end of the pin H out of engagement with the eye D′ of the head D to permit the operator to swing the head and rods F and F′ upward, as previously explained.

Thus it will be seen that by the arrangement described the support can be readily carried on the bicycle-frame and put in instant use to support the bicycle on level ground.

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

1. In bicycle-supports, the combination, with the shouldered clip for a frame-bar B, of the pivoted head D, having the transverse open slot in its outer and free end, and a pin E^2, fixed transversely in the central upper portion of the slot, the two similar rods pivoted side by side at opposite points within said slot, their heads or upper portions being extended into the latter beyond the pivots and beveled and notched on their inner sides as specified, whereby they are adapted to fit together and engage the stop-pin E^2; when extended, as shown and described.

2. A bicycle-support, comprising a clip, adapted to be secured to the lower brace or reach of a bicycle, and having an open lengthwise slot, and rear shoulder A′; the head D, pivoted in said slot, and having itself an open transverse slot; a pin crossing the latter slot centrally; the two legs pivoted at opposite points below and equidistant from such cross-pin, and having notches in their extended upper ends for engaging the same; a spring and locking-pin arranged as specified, the aforesaid clip and head having coincident holes for receiving said locking-pin, as shown and described.

WILLIAM METZRATH.

Witnesses:
FREDERICK WEIGEL,
P. M. WELSH.