

No. 675,358.

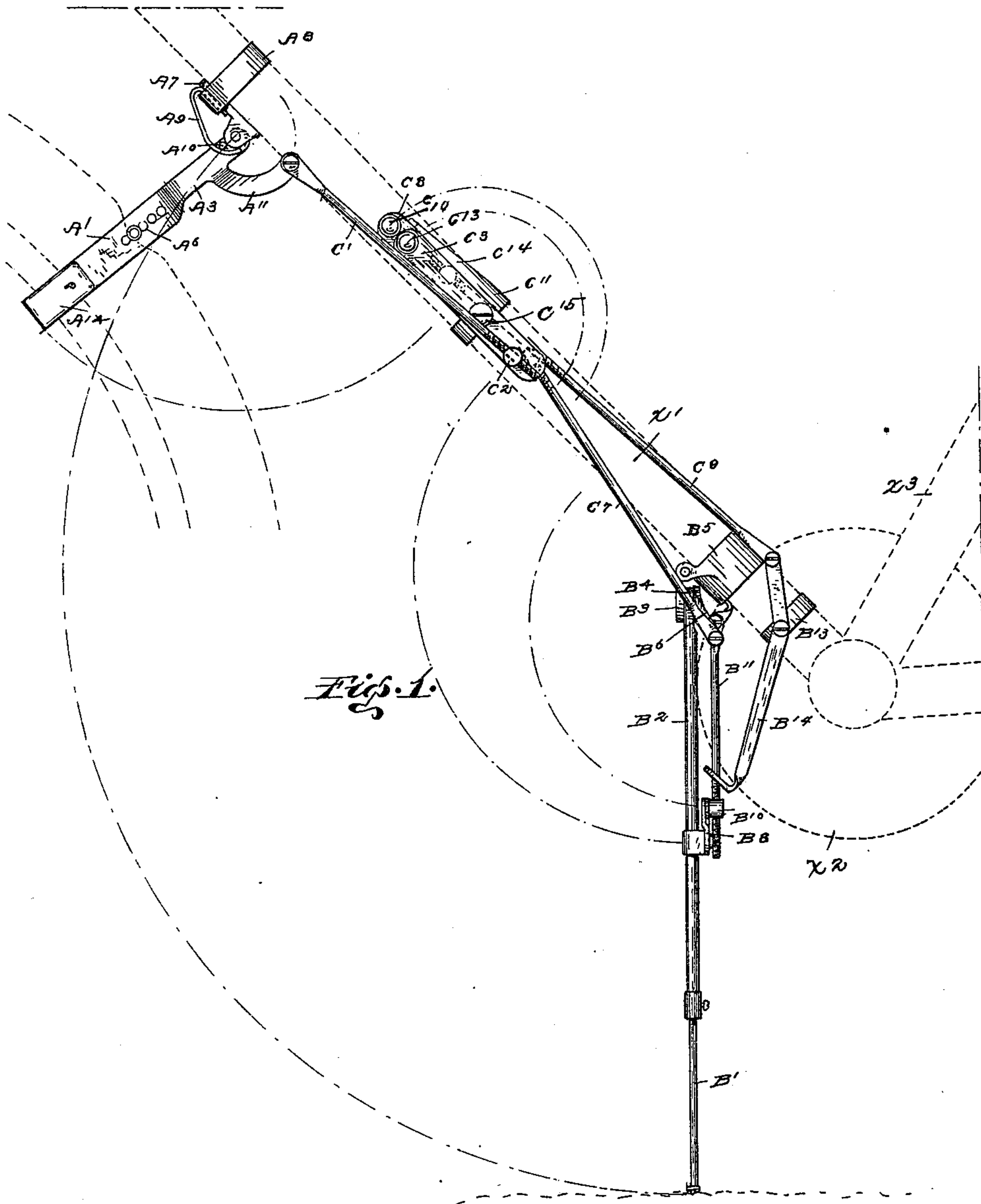
Patented May 28, 1901.

A. McCOLLUM.
SUPPORT FOR BICYCLES.

(Application filed Dec. 22, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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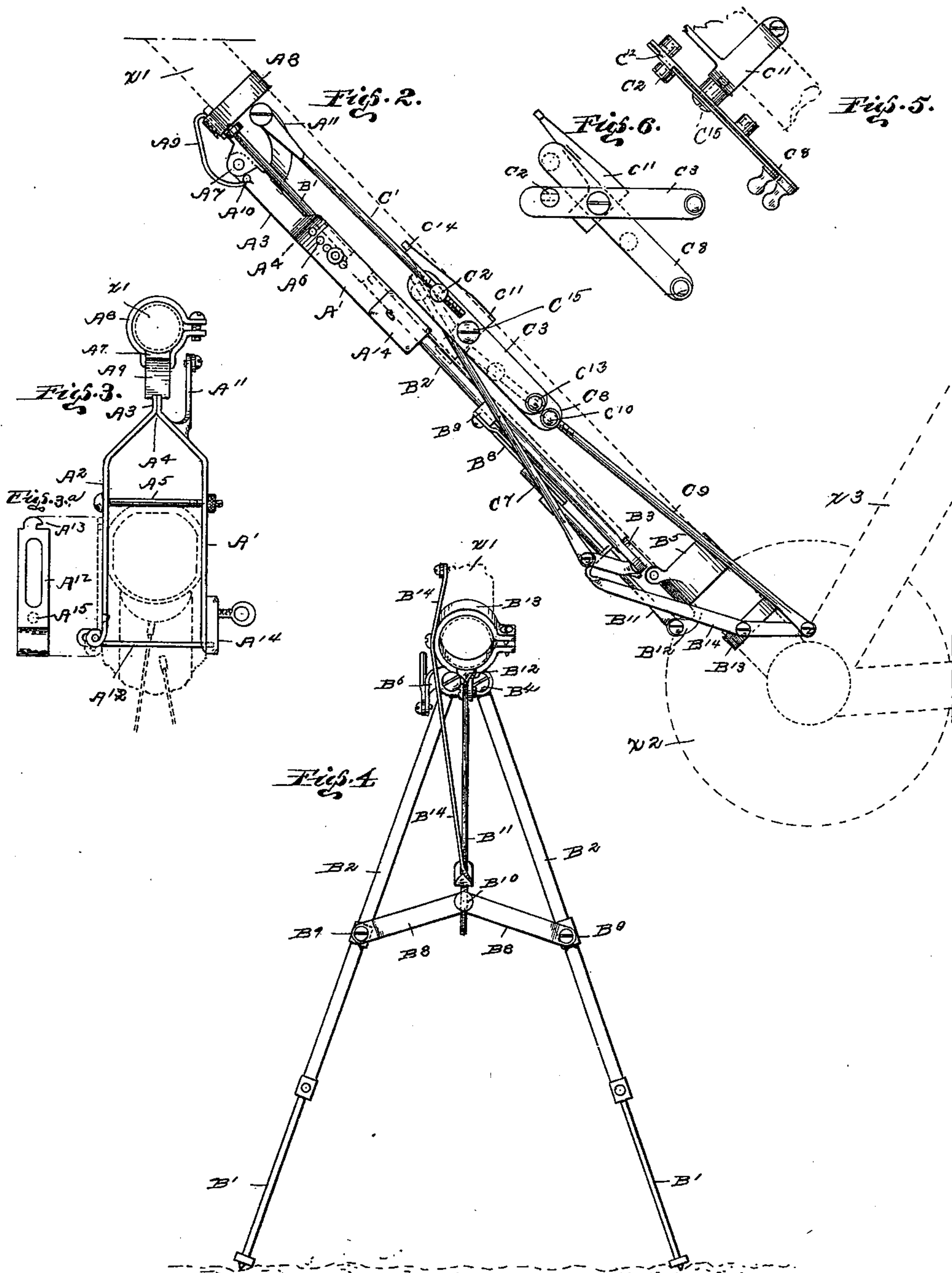
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UNITED STATES PATENT OFFICE.

ARTHUR MCCOLLUM, OF SAN JOSE, CALIFORNIA.

SUPPORT FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 675,358, dated May 28, 1901.

Application filed December 22, 1900. Serial No. 40,820. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR MCCOLLUM, a citizen of the United States, residing at 944 Orchard street, San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Supports for Bicycles; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in bicycle-supports.

The object of the invention is to provide suitable means carried on the bicycle-frame for supporting the bicycle in a standing position and, further, to lock the same in standing position.

In the drawings, Figure 1 is a side elevation of the invention in operative position, portions of the bicycle being shown in dotted construction. Fig. 2 is a similar view in inoperative position. Fig. 3 is a front elevation of the mechanism for locking the front wheel. Fig. 3^A is a side elevation of the locking-hasp for securing the front wheel with a key-lock. Fig. 4 is a rear elevation of the supporting-legs and their immediate mechanisms in operative position. Fig. 5 is a plan view of the lever mechanisms for throwing the parts into and out of their normal position. Fig. 6 is a side elevation of the same.

The invention consists of the front-wheel locking mechanism A, the spreading supporting mechanisms B, and the actuating mechanisms C, intermediately located for operating and locking the mechanisms A and B.

In the description with reference to the drawings the minor mechanisms of the above-designated groups will be given the distinguishing common letter strengthened by a numeral.

The locking mechanism A consists of a yoke member whose side pieces A' A² are capable of a lateral springiness, and this feature is best achieved by forming the yoke of two strips of sheet-steel. The upper ends, forming the stem A³ of the yoke, are brazed or otherwise secured together from the head of the stem to the offset A⁴ of the yoke. The bar A⁵ is extended between the side pieces A'

A² to bear against the tread of the bicycle-tire, the perforations A⁶ in the side pieces permitting of an adjustment to accommodate the various diameters of tires, &c. The depression of the bicycle-tire by the bar A⁵ and compression by the side pieces A' A², Figs. 1 and 2, constitute an effective lock for the front wheel of the bicycle. The head of the stem A³ is pivoted in the block A⁷, held rigidly against the under side of the forward brace X' of the bicycle-frame by the encircling clamp A⁸. The finger-spring A⁹, the rigid end of which is secured between the block A⁷ and clamp A⁸, the free end bearing against the pin A¹⁰ in inoperative position, holds the lock A in position and prevents rattling of the parts. The concentric extension A¹¹ on the stem A³ is pivoted to the connecting-rod C', which connects with the pivotal stud C², into which its threaded end is screwed, permitting adjustment. The stud C² is mounted on the end of the lever C³, pivoted on the clamp C¹¹ of the actuating mechanism. To lock the side pieces A' A² together under the rim of the front wheel of the bicycle, the hasp-bar A¹² is hinged to the lower extremity of the side piece A², the free end of the hasp A¹² being provided with the catch A¹³, adapted to engage the bolt of a suitable lock A¹⁴, secured to the lower extremity of the side piece A'. The hasp A¹² is so hinged as to allow for the lateral separation of the side pieces A' and A². The hasp A¹² extends under the rim of the wheel between the spokes, locking the wheel so that it can be released only by the holder of the key to the lock A¹⁴. The hasp A¹² can be secured in inoperative position against the side piece A², as shown in dotted lines, Fig. 3, by the glove-button device A¹⁵ on the hasp, sprung into a perforation in the side piece A².

The supporting-legs B, pivoted behind the operating-levers C³ and C⁸, consist of the rods B', telescoping within the tubes B², which are pivoted between the plates B³ and B⁴, the former being pivoted in a lug on the clamp B⁵, encircling the tube X' of the bicycle-frame. The plate B⁴ is provided with the extension B⁶, to which the connecting-rod C⁷ is attached, the rod connecting with the lever C⁸ in the manner described with reference to the rod C' and lever C³. The tubes B² are spread laterally by a knuckle connection con-

sisting of the bars B^8 and B^8 , their outer ends being pivotal on the adjustable lugs B^9 on the tubes B^2 B^2 , the inner ends of the bars B^8 B^8 being pivoted on a stud B^{10} , into which
 5 the upwardly-extending rod B^{11} is screwed. The upper end of the rod B^{11} is pivoted to a block B^{12} , adjustably secured to the under side of the tube X' of the bicycle-frame. Fulcrumed in a clamp B^{13} behind the clamp B^5
 10 is the lever B^{14} , which is pivoted above the fulcrum to the connecting-rod C^9 , which connects with the actuating-lever C^8 in the manner described with reference to the rod C' and lever C^3 . Below the fulcrum the lever
 15 B^{14} reaches downward, a portion of its extremity being bent at an angle and slotted to receive the rod B^{11} .

The operation of this invention, supposing the parts to be in inoperative position, Fig.
 20 2, is as follows:

First. Grasp the handle C^{13} on the lever C^3 and throw to the left until the lever C^3 comes in contact with the lug or offset C^{12} on the similar lever C^8 . This action throws the locking
 25 mechanisms A down, releasing the ends of the supporting-rods B' .

Second. Grasp the handle C^{10} on the lever C^8 and throw to the left until both levers C^3 and C^8 are sprung under and locked in position
 30 by the extension C^{14} on the clamp C^{11} . This last action throws the locking mechanism A into contact with the front wheel of the bicycle and the supporting mechanisms or legs in contact with the ground, as shown in Fig. 1.

The rod B^{11} , being pivoted behind the pivotal center of the rods B^2 B^2 , causing an eccentric action, acting upon the knuckle construction composed of the bars B^8 B^8 , causes the extension and contraction of the supporting-rods B^2 B^2 . (See interrupted lines of action, Fig. 1.)

The lever B^{14} , operated by the actuating-lever C^8 through the connecting-rod C^9 , which lies above the fulcrum-pin C^{15} when the parts
 45 are in open operative position, acts as rear brace for the supporting mechanisms B, relieving the actuating mechanism C from direct strain in the operative position and combining with the detent C^{14} to hold the parts
 50 locked in said position. It is advantageous to adjust the supporting mechanisms so that in the operative position one of the supporting-rods B^2 rests against the forward sprocket X^2 of the bicycle-gear. The lever B^{14} and its
 55 mechanisms may be dispensed with without seriously crippling the action of the supporting mechanism.

The supports of the bicycle extending to either side of the center of gravity throw the
 60 weight of the bicycle upon the wheels instead of upon the supporting mechanism, which may be made materially lighter, &c., in consequence.

The spread of the supporting-rods B' may
 65 be regulated by sliding the blocks B^9 B^9 on the tubes B^2 B^2 or by advancing or receding the pivotal point of the rod B^{11} , which may

be accomplished by relieving the clamp B^5 and adjusting the block B^{12} .

The adjustment of the connecting-rods of
 70 the actuating mechanism C is accomplished by the threaded connection described with reference to the levers C^3 C^8 .

The pressure on the front tire by the bar A^5 is regulated by the adjusting-perforations A^6 .
 75

The mode of lengthening or shortening of the supporting-rods is obvious by the telescoping of the rods B' and tubes B^2 .

As is apparent by the construction above described, this bicycle-support is applicable
 80 to any of the accepted designs of safety-bicycles.

Having thus described this invention, what I claim is—

1. In a support for bicycles and the like, a
 85 supporting-leg pivotally connected to the frame of the machine and adapted to be raised and lowered and also to swing laterally, and a bar pivoted to said leg and also pivotally connected to the frame, the point of pivotal connection between said bar and the said frame
 90 being other than the point at which said leg is pivoted and said pivotal points being relatively fixed, whereby as said leg is raised or lowered said bar serves to swing the same laterally; substantially as described.

2. In a support for bicycles and the like, a supporting-leg pivotally connected to the frame of the machine and adapted to be raised and lowered and also to swing laterally, a rod
 100 pivoted upon the frame of the machine at a point other than that at which said supporting-leg is pivoted, said pivotal points being relatively fixed, and a bar pivoted to said leg and said rod whereby as said leg is raised and
 105 lowered, said bar serves to swing the same laterally; substantially as described.

3. In a support for bicycles and the like, two supporting-legs pivoted to the frame of the machine and adapted to be raised and
 110 lowered and also to swing laterally, a knuckle-joint between said legs and having its opposite members pivoted to the respective legs, and pivotal connection between the fulcrum of said knuckle-joint and the frame, said
 115 point of pivotal connection being other than that at which the legs are pivoted and said pivotal points being relatively fixed, whereby as said legs are raised or lowered said knuckle-joint serves to swing them laterally to spread
 120 or fold the legs; substantially as described.

4. In a support for bicycles and the like, a supporting-leg pivotally connected to the frame of the machine and adapted to be raised
 125 or lowered and also to swing laterally, a bar pivoted to said leg and also pivotally connected to the frame, the point of pivotal connection between said bar and the said frame being other than the point at which said leg is pivoted and said pivotal points being relatively fixed, whereby as said leg is raised or
 130 lowered said bar serves to swing the same laterally, and means for varying the throw of said bar; substantially as described.

5. In a support for bicycles and the like, a supporting-leg pivotally connected to the frame of the machine and adapted to be raised and lowered and also to swing laterally, and a bar pivoted to said leg and also pivotally connected to the frame, the point of pivotal connection between said bar and the said frame being other than the point at which said leg is pivoted and said pivotal points being relatively fixed, whereby as said leg is raised or lowered said bar serves to swing the same laterally, said bar having adjustable connection with said leg whereby the throw of said parts can be varied; substantially as described.

6. In a support for bicycles and the like, a supporting-leg pivotally connected to the frame of the machine and adapted to be raised and lowered and also to swing laterally, a rod pivoted upon the frame of the machine at a point other than that at which said supporting-leg is pivoted, said pivotal points being relatively fixed, and a bar pivoted to said leg and having adjustable connection with said rod whereby as said leg is raised or lowered said bar serves to swing the same laterally, the throw of the parts being variable; substantially as described.

7. In a support for bicycles and the like, a supporting-leg pivoted upon the machine, an operating-lever pivoted upon the machine, a brace-lever pivoted upon said machine and connected with said supporting-leg, a rod connecting said supporting-leg with said operating-lever upon one side of its fulcrum, said brace-lever being connected with said operating-lever upon the opposite side of said fulcrum and the connecting-rod of said leg or said brace-lever extending across the fulcrum-pin of said operating-lever when the parts are in open operative position, and a detent en-

gaging the edge of said operating-lever to hold the same against the normal closing movement of said leg; substantially as described.

8. In a support for bicycles and the like, a supporting-leg pivotally connected to the frame of the machine and adapted to be raised and lowered and also to swing laterally, a rod pivotally connected to said machine behind said leg, the said pivotal points of said leg and rod being relatively fixed, a bar pivotally connected to said leg and said rod, whereby as said leg is raised and lowered said bar causes the same to swing laterally, an operating-lever pivoted to the machine in front of said leg, a brace-lever pivoted to said machine behind said rod, said lever having its lower arm in engagement with said rod, a connecting-rod between said leg and the end of the operating-lever which lies toward said leg when the parts are in open, operative position, a second connecting-rod lying above the fulcrum-pin of said operating-lever and connecting the upper arm of said brace-lever with the arm of said operating-lever opposite to that to which said first-mentioned connecting-rod is connected, and a detent engaging a side of said operating-lever to hold the same against the normal closing movement of said leg; substantially as described.

9. In a device of the nature indicated, a pair of operating-levers, a lug upon one of said levers adapted to engage the other thereof, and means for locking said lug-carrying lever; substantially as described.

In testimony whereof I have hereunto set my hand this 4th-day of December, 1900.

ARTHUR MCCOLLUM.

Witnesses:

WM. M. BEGGS,

N. FRANK PRESSEY.