(No Model.)

J. R. MOORE.

BICYCLE STAND.

No. 602,415. Patented Apr. 12, 1898.

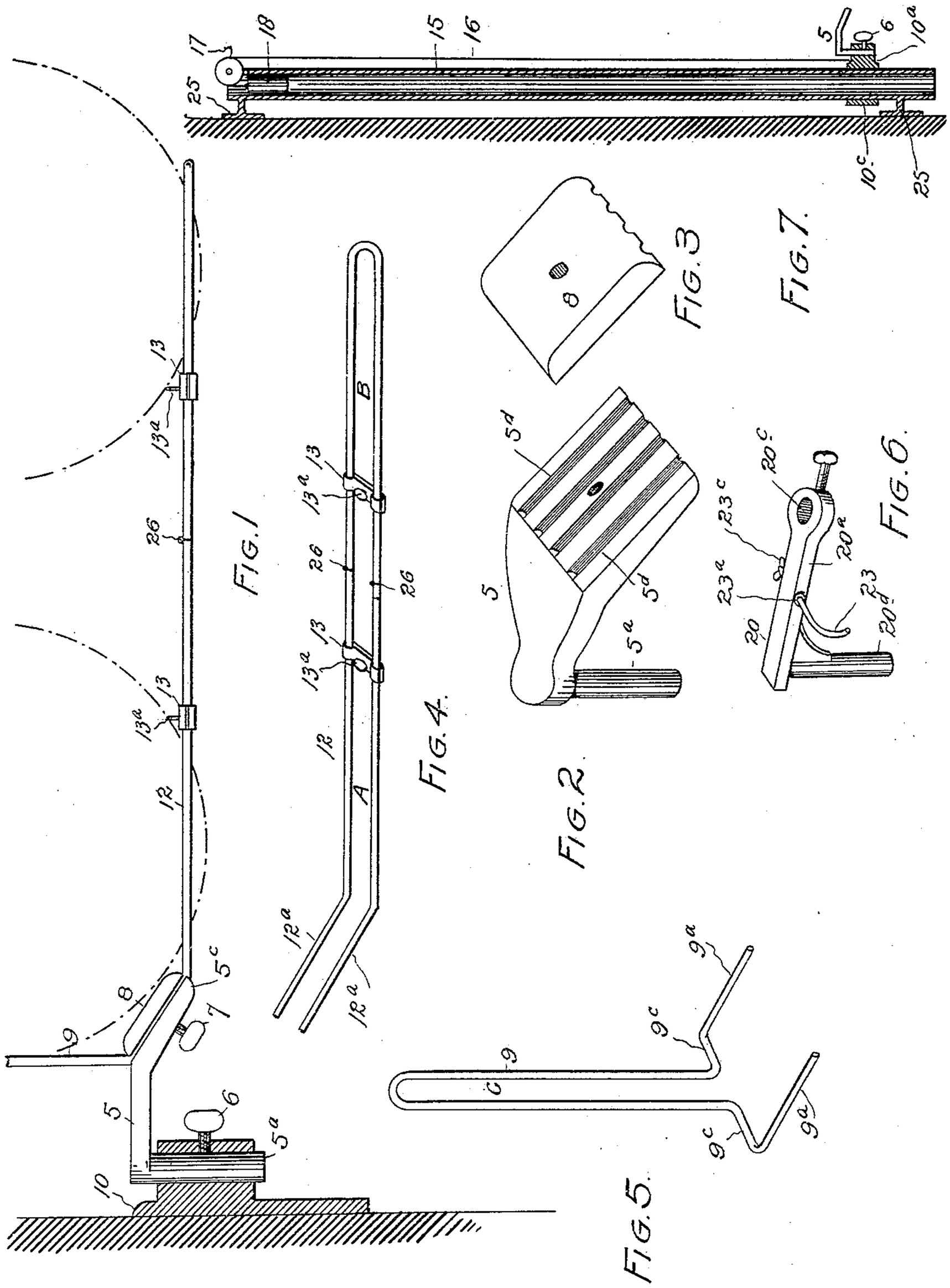

FIG. 1

FIG. 4.

FIG. 3

FIG. 7.

FIG. 2.

FIG. 6.

FIG. 5.

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BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 602,415, dated April 12, 1898.

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To all whom it may concern:

Be it known that I, JOSEPH R. MOORE, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Bicycle-Stands; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in bicycle-stands; and it consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation of my improved bicycle-stand. Fig. 2 is a perspective view of the swinging bracket. Fig. 3 is a similar view of the detachable shoe used in conjunction with the bracket. Fig. 4 is a perspective view in detail of the horizontal rack. Fig. 5 is a similar view of the vertical rack. Fig. 6 is a perspective view of the auxiliary bracket. Fig. 7 illustrates a modified form of construction.

Similar reference characters indicating corresponding parts in the views, let the numeral 5 designate a bracket having a depending stem 5^a engaging a socket formed in a plate 10, attached to a wall or other suitable stationary support. The outer portion 5^c of the bracket is downwardly inclined and provided with four grooves 5^d on its upper surface. To the grooved face of this bracket is applied a correspondingly-grooved shoe 8, the shoe and the bracket being connected with a set-screw 7. Between the bracket and the shoe are secured the vertical and horizontal racks 9 and 12, respectively, each composed of an integral rod bent double and shaped to receive the wheels of the bicycle. The extremities of the rods forming these racks are bent to conform to the inclination of the part 5^c of the bracket. The extremities 9^a of the part 9 are also bent outwardly from the main vertical portion, as shown at 9^c, to permit them to engage the two outer grooves of the bracket and shoe. The bent extremities 12^a of the rack 12 engage the inner grooves of the bracket and shoe. The racks are locked in place by the set-screw 7, which passes through the part 5^c of the bracket and engages a threaded aperture formed in the shoe 8. The rack 12 is provided with adjustable stops 13, each composed of two parts whose extremities clasp the parallel sides of the rack. The parts are locked in place by a set-screw 13^a. When in use, one bicycle-wheel occupies the space A of the rack 12 between the shoe 8 and the stop 13 nearer the shoe, while the other wheel occupies the space B between the outer stop 13 and the outer extremities of the rack. The rack 12 is hinged or jointed, as shown at 26, to allow it to be folded when not in use. The wheel which occupies the space A of the rack 12 also engages the shoe 8 and the rack 9.

The socket-plate 10 may be placed any desired distance above the floor of the room, and the stand may be adjusted to occupy a position parallel with the wall to which the plate 10 is attached, or it may be swung to form any desired angle therewith.

In Fig. 7 a modified form of the construction is shown. This is adapted to permit the vertical adjustment of the stand. In this case the socket-support 10^a for the bracket 5 is provided with a collar 10^c, which surrounds an upright tube 15, upon which the part 10^a is adapted to slide freely. The tube 15 is attached to the stationary support in any suitable manner, as by apertured plates 25, cast integral with the tube or attached thereto in any suitable manner. To the movable socket 10^a is attached a cord or chain 16, which passes over a pulley 17, mounted on the top of the tube, the opposite extremity of the chain being connected with a weight 18, adapted to slide freely in the tube. The gravity of this weight should be so adjusted that the stand and the bicycle carried thereby may be easily raised or lowered.

It will be observed that the apparatus may be quickly taken apart and packed into small space.

It will often be found convenient to employ an auxiliary bracket 20 (see Fig. 6) in con-

nection with the mechanism already described. This bracket 20 is composed of a horizontal arm 20^a and a vertical stem 21, adapted to fit the socket in the plate 10. The outer extremity of the arm 20^a is provided with an eye 20^c, adapted to receive the stem 5^a of the bracket 5. Either bracket may be locked in any desired position of adjustment by means of a set-screw 6. The bracket 20 is provided with a curved stop 23, passed through an aperture 20^a. This stop is provided with a collar 23^a, adapted to engage one side of the bracket-arm, and a set-screw 23^c, adapted to engage the opposite side of said arm. This stop 23 engages the wall and prevents the moving of the rack thereagainst.

Having thus described my invention, what I claim is—

1. In a bicycle-stand, the combination of the suspended bracket having a grooved inclined face, the shoe adaped to fit the inclined face of the bracket and provided with counterpart grooves, the horizontal and vertical racks, each composed of two parallel arms adapted to receive the wheels of the bicycle and support the latter in an upright position, said racks being adapted to engage the grooves in the bracket and shoe, and suitable means for connecting the bracket and shoe, substantially as described.

2. In a bicycle-stand, the combination of the suspended swinging bracket having a grooved inclined face, the horizontal and vertical racks each composed of two parallel arms adapted to receive the bicycle-wheels, and having bent extremities adapted to engage the grooves in the bracket and shoe, and suitable means for connecting the bracket and shoe, substantially as described.

3. In a bicycle-stand, the combination of a vertically-adjustable suspended bracket having an inclined face, a shoe adapted to fit the bracket, the horizontal and vertical racks each having parallel arms adapted to receive the bicycle-wheels, said racks being adapted to engage the bracket and shoe which embrace the rack extremities on opposite sides, and suitable means for connecting the bracket and shoe whereby the racks are held securely in place.

4. In a bicycle-stand, the combination of the suspended vertically-adjustable swinging bracket having an inclined face, a shoe adapted to fit said face, the horizontal and vertical racks adapted to receive the wheels of the bicycle and support the same in an upright position, said racks being adapted to engage the inclined face of the bracket, and suitable means for connecting the bracket and shoe which embrace the rack extremities on opposite sides.

5. A bicycle-stand, comprising a rack occupying substantially a horizontal position and composed of two separated arms adapted to receive the bicycle-wheels and provided with suitable stops to hold the wheel securely in place, and suitable means attached to one extremity of the rack for suspending the latter at any desired height above the ground or other surface.

6. In a bicycle-stand, the combination with a suitable socket, of the bracket having an inclined face provided with grooves, and a depending stem adapted to engage and turn in the socket which is located a suitable distance above the ground or other surface, the horizontal and vertical racks having bent extremities adapted to engage the grooves in the inclined face of the bracket, each of said racks being composed of two parallel arms adapted to receive the wheels of the bicycle, the horizontal arm being provided with stops engaging the wheels and holding the machine securely in place, a shoe adapted to engage the inclined face of the bracket and having counterpart grooves adapted to engage the rack extremities, and suitable means for fastening the shoe to the bracket and securing the racks in place, said means consisting of a screw passing through an aperture in the bracket and engaging threaded apertures in the shoe.

7. The combination with a suitable support, of a vertically-adjustable socket located a suitable distance above the ground or other surface, a bracket having a depending stem adapted to engage and turn freely in the socket, the horizontal and vertical racks, each rack having one extremity adapted to engage the bracket, a shoe adapted to engage the bracket and embrace one extremity of each rack, the said rack extremities being located between the bracket and shoe, and suitable means for fastening the shoe to the bracket and securing the racks in place, substantially as described.

8. In a bicycle-stand, the combination with an upright tube suitably supported, a socket-support having a collar surrounding said tube, the bracket having a stem adapted to engage the socket of said support, a rack detachably connected with said bracket, the rack having separated parallel arms adapted to receive the wheel or wheels of the bicycle, and having suitable stops attached to the arms of the rack for holding the wheel securely in place, and means for vertically adjusting the bracket consisting of a cord or chain having one extremity attached to the bracket, a pulley attached to the upper extremity of the tube over which the cord passes, and a weight attached to the opposite extremity of the cord and adapted to move freely in the tube during the vertical adjustment of the bracket.

9. In a bicycle-stand, the combination with an upright tube or hollow bar, the socket-support movably attached to said tube, a bracket having a stem engaging the socket of said support, a rack detachably secured to the bracket, the rack consisting of parallel arms adapted to receive the wheels of the bi-

cycle and having stops connecting the arms for holding the bicycle securely in place, and means connected with the socket-support and engaging the tube for maintaining the bracket and its attachment at any desired height above the ground or other surface.

10. A bicycle-stand comprising a swinging bracket, suitably suspended above the floor or other surface, a rack suitably attached to said bracket and adapted to engage the wheels of a bicycle and support the latter in an upright position, and suitable means connected with the bracket for limiting the swinging of the bicycle in a horizontal plane, said means being adapted to engage the wall or other upright support upon which the bracket is suspended.

11. A bicycle-stand comprising a suitable suspended support, and a rack suitably attached to said support and comprising two separated parallel arms, and an adjustable stop attached to said arms and adapted to engage a wheel of the bicycle, as and for the purpose set forth.

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

JOSEPH R. MOORE.

Witnesses:

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