

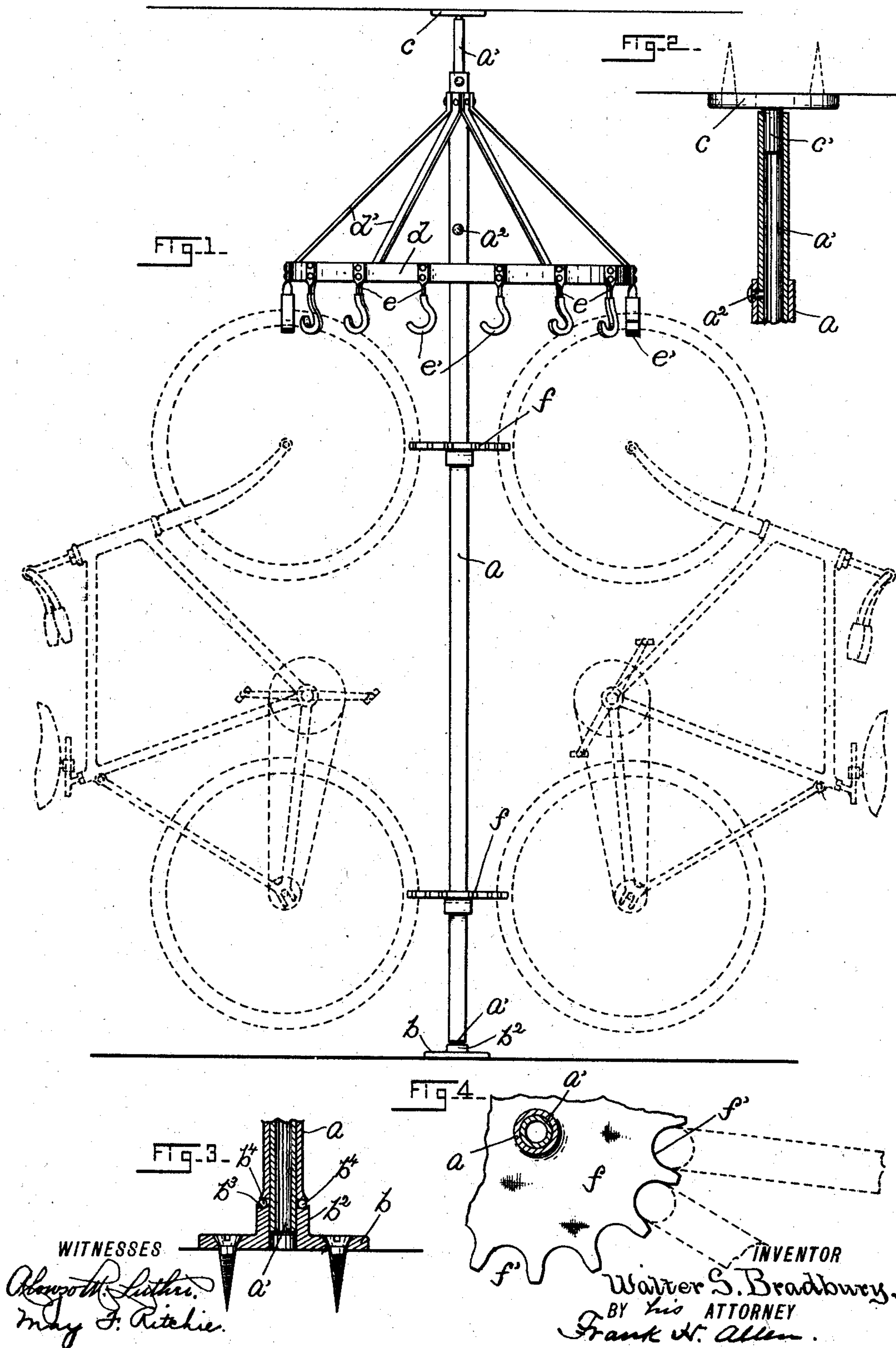
No. 706,718.

Patented Aug. 12, 1902.

W. S. BRADBURY.  
BICYCLE STAND.

(Application filed Oct. 17, 1901.)

(No Model.)





# UNITED STATES PATENT OFFICE.

WALTER S. BRADBURY, OF WILLIMANTIC, CONNECTICUT.

## BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 706,718, dated August 12, 1902.

Application filed October 17, 1901. Serial No. 79,033. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER S. BRADBURY, a citizen of the United States, residing at Willimantic, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Bicycle-Stands, of which the following is a full, clear, and exact description.

The object of this invention is to provide a bicycle-rack that is especially adapted for use in salesrooms, club-houses, repair-shops, and other places where it is desirable to assemble a large number of wheels in a comparatively small space, either for storing the said wheels or for exhibition purposes.

Briefly describing my newly-invented rack, the same consists of an extensible vertical spindle held at its upper and lower ends in suitable bearings, in which it is adapted to rotate. Supported by the said spindle near its upper end is a ring concentric therewith, and located at equidistant points on the said ring are depending hooks equaling in number the number of bicycles which the rack is designed to accommodate. Each of the said hooks is adapted to engage the rim of the front wheel of a bicycle, which latter hangs downward from the said hook and is suspended thereby clear of the floor. To prevent the bicycle from swinging freely on its supporting-hook, the front and rear wheels are engaged by notched disks located on the spindle, which disks serve to prevent the lateral deflection of the bicycles, and thus prevent the latter from becoming entangled with their immediate neighbors.

To assist in the explanation of my invention, the accompanying drawings have been provided, illustrating the same as follows:

Figure 1 is an elevation of my newly-invented bicycle-rack and showing in dotted lines the manner in which bicycles are supported by said rack. Fig. 2 is an enlarged view showing principally in central vertical section the construction of the upper end of the spindle and the manner in which the same is secured in position. Fig. 3 is a view similar to Fig. 2, showing the lower portion of the said spindle. Fig. 4 is a plan view, also on a somewhat-enlarged scale, of a portion of one of the above-mentioned notched disks.

Referring to the drawings, the letter *a* de-

notes the spindle proper, which is preferably tubular and may be a piece of iron pipe of the desired diameter and somewhat greater in length than a bicycle. The spindle *a* has telescoped therein a rod *a'*, which is preferably tubular and may also be of iron pipe, the opposite ends of which rod *a'* project beyond the ends of the spindle proper, *a*, and form extensions of the latter. The rod *a'* may extend entirely through the spindle *a* or a separate rod *a'* may be provided at each end of the said spindle *a*. The rod *a'* is secured within the spindle *a* by rivets *a<sup>2</sup>* or otherwise, and when thus secured is practically a part of the said spindle. The rod *a'* is of such length that its projecting opposite ends serve as journals that engage the bearings or supports on which the spindle *a* is adapted to rotate, which bearings or supports are secured to the floor and ceiling of a room.

The lower or "step" bearing, which is denoted as a whole by the letter *b*, consists of a base portion screwed to the floor and has a centrally-bored hub *b<sup>2</sup>*, in which the lower spindle extension *a'* is received and is adapted to rotate. The upper face of the hub *b<sup>2</sup>*, confronting the lower end of the spindle *a*, is preferably provided with a raceway *b<sup>3</sup>* for the reception of steel balls *b<sup>4</sup>*, which when in position between the said hub and the lower end of the spindle *a* receive the weight of the complete rack and enable the rack and its load of wheels to be very easily rotated.

The upper bearing or support of the spindle is denoted by the letter *c* and consists of a plate having a central stud *c'*, which enters the end of the upper tubular extension *a'* of the spindle *a*. The bearing *c* is screwed or otherwise secured to the ceiling, with its stud *c'* in vertical alinement with the centrally-bored hub *b<sup>2</sup>* of the bearing *b*. When the bearing *b* and support *c* are thus in vertical alinement, it will be obvious that the spindle *a* will be vertically supported and capable of free rotation on the said bearing and support.

The reference-letter *d* denotes the before-mentioned ring or band, which is located near the upper end of the spindle *a* and supported concentric with the latter by means of stays *d'*, leading from the spindle *a* to the said ring *d*. Secured to the said ring *d* at equidistant points are depending hooks *e*,



from each of which a bicycle is adapted to be suspended by its front wheel, the rim of the latter being engaged by the said hook, and in order to prevent the scratching or marring  
 5 of the said rims the hooks *e* are preferably provided with a covering *e'* of leather or other soft material.

The notched disks already mentioned are located one below the other and are denoted  
 10 as a whole by the letter *f*. The notches therein (which correspond in number with the hook *e*) are denoted by the letter *f'* and are each of proper size to receive the tire of a bicycle-wheel. The disks *f* are properly  
 15 located on the spindle *a*, so that their notches may be engaged by the tires of the front and rear wheels of the bicycles.

The disks *f*, as already set forth, serve to prevent lateral swinging of the bicycles on  
 20 the hooks. The bicycles are thus held by said disks from contact with the spindle *a* and are also prevented from coming in contact with each other at the center of the rack, where they might otherwise become badly entangled  
 25 and damaged.

It should be noted that the bicycles are so supported that they radiate from the vertical center of the rack, as will be understood by reference to Fig. 4, so that while it is possible for the tires of adjacent bicycles to be  
 30 in close proximity at their point of engagement with the notched disks *f* sufficient space is provided (because of such radiation) for the wider portions of the bicycles—as, for example, the pedals and handle-bars.

I have already stated that the spindle extensions *a'* may be a single rod or such extensions may each be a separate rod, and it will be obvious that when the latter construction  
 40 is followed the upper extension may be extended and adjusted within the spindle *a* to vary the length of the complete spindle and so as to render it easy to erect the rack in rooms of different heights. I therefore do  
 45 not wish to confine myself to either manner of constructing said extensions nor do I wish to confine myself to the particular forms of spindle bearings or supports shown and described, as other forms could be employed.

50 In order that the hooks may receive the

rims of the front wheels of a bicycle while the tires of both wheels are held in the notches of the disks, the hooks are turned so as to extend in a circular plane concentric with the ring.

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Having a bicycle-rack of my improved construction a large number of bicycles may be very compactly supported, and by reason of its being capable of rotation said rack may be set in the corner of a room or in other  
 60 places having little clear space surrounding the same, any desired bicycle being reached by partially rotating the rack, so as to bring such bicycle into position where it can be conveniently removed.

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My device as a whole is of simple construction, may be cheaply produced, and operates in a satisfactory manner in the accomplishment of the ends for which it was designed.

Having thus described my invention, I  
 claim—

1. A bicycle-rack consisting of a rotatable vertical spindle, a ring concentric with said spindle, fixed hooks suspended from said ring to receive the rim of the front wheel of a bicycle, a disk on said spindle in proximity to  
 75 said hooks and having notched periphery, and a second disk fixed to said spindle near its lower end and having notched periphery the notches of which are in vertical alignment with the notches of the upper disk and with the said hooks, as set forth.

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2. A bicycle-rack consisting of a rotatable vertical spindle, a rod telescoping in the same, means for holding the same in adjusted position, a lower bearing for said rod having hub with raceway, balls in said raceway and engaging the lower end of the spindle, a ring concentric with the spindle, hooks suspended therefrom, and upper and lower notched  
 85 disks fast on the spindle below the said ring and having their notches in vertical alignment with each other and with said hooks as set forth.

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Signed at Willimantic, Connecticut, this 3d  
 day of October, 1901.

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WALTER S. BRADBURY.

Witnesses:

H. WILMER BRADBURY,  
 FRANK H. ALLEN.