

(No Model.)

A. S. LANG.
BICYCLE SUPPORT.

No. 585,917.

Patented July 6, 1897.

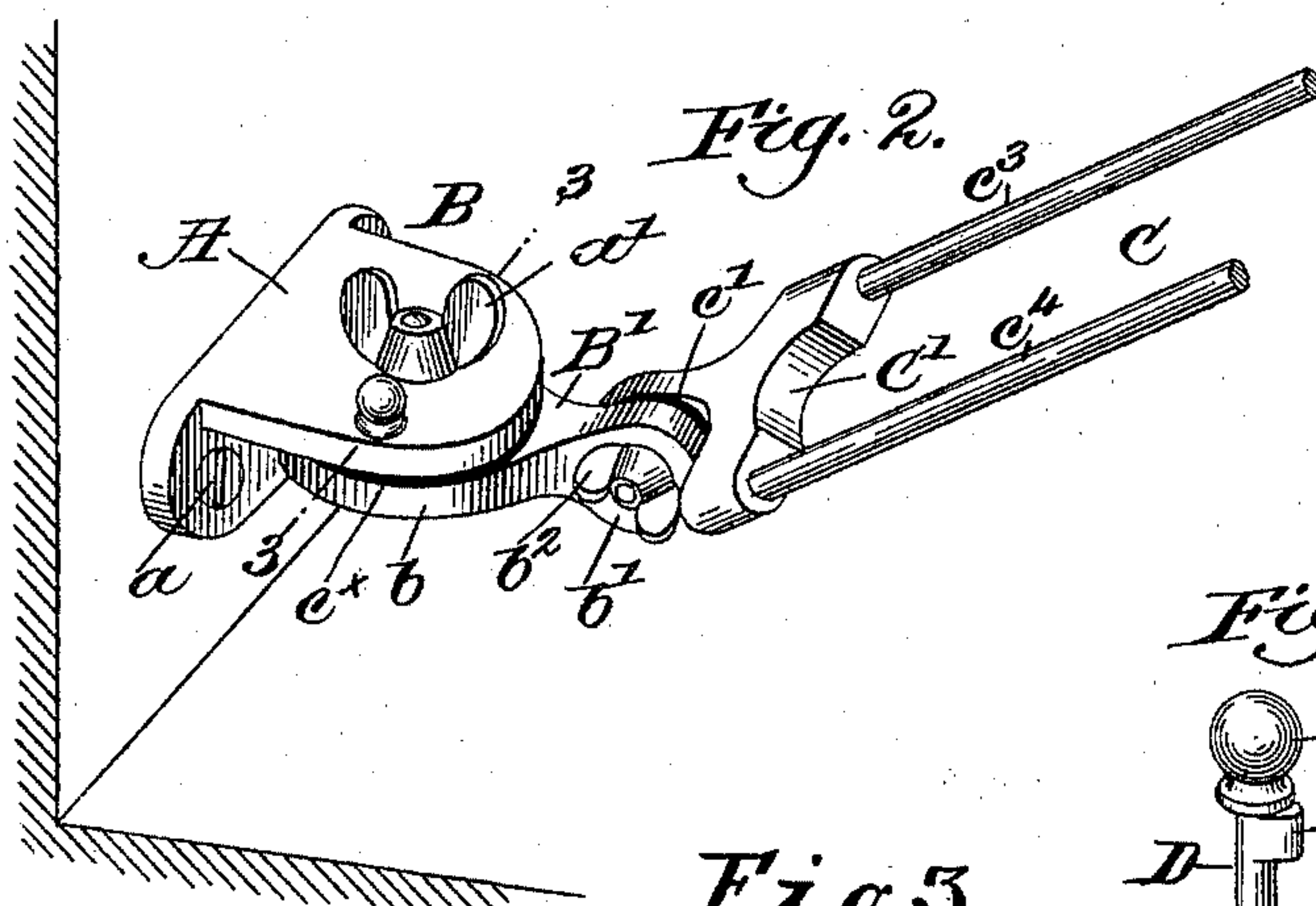
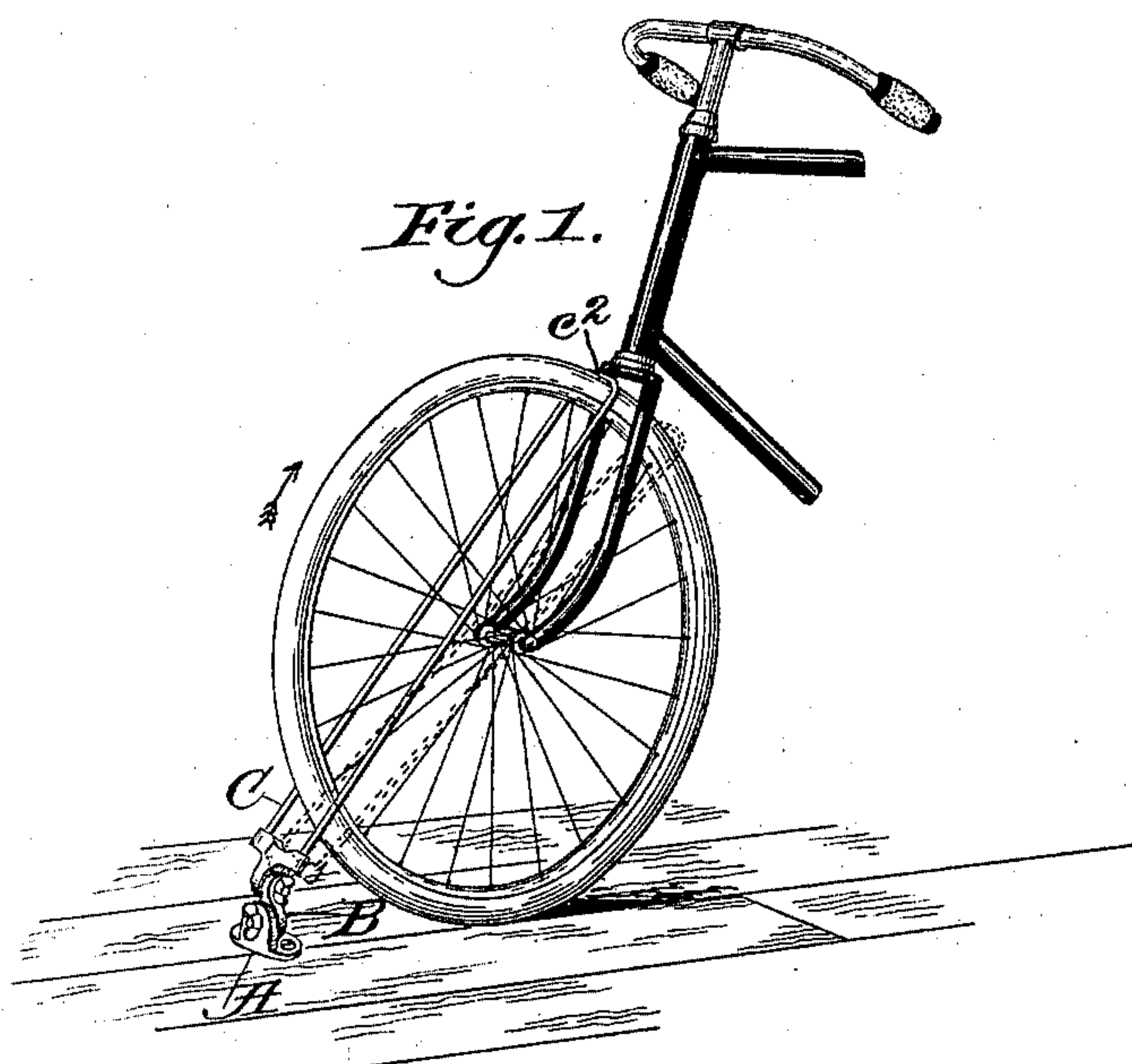


Fig. 4.

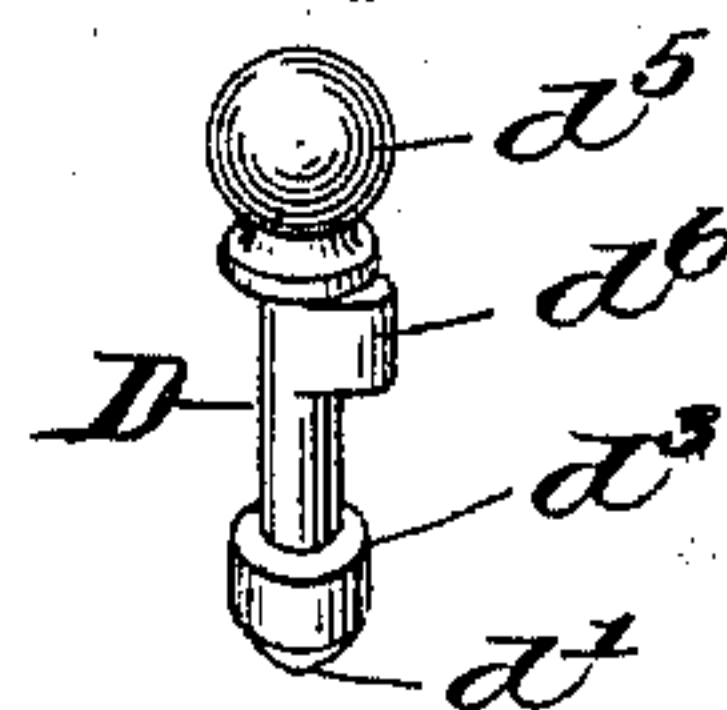
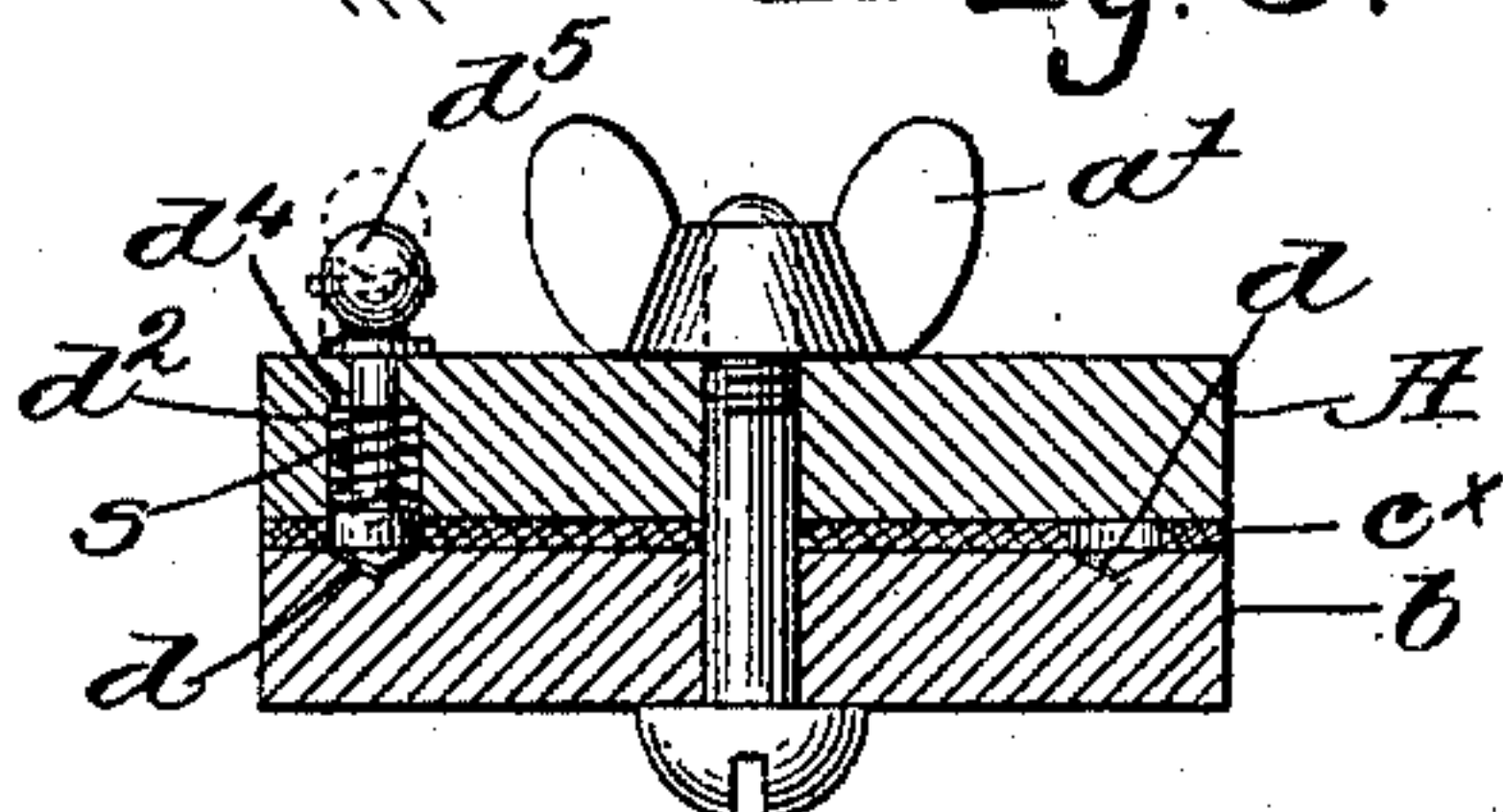


Fig. 3.



Witnesses:

A. C. Harmon.
Thomas Drummond.

Inventor:

A. S. Lang.
by Crosby & Langley -
attys.

UNITED STATES PATENT OFFICE.

ARTHUR S. LANG, OF SALEM, MASSACHUSETTS.

BICYCLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 585,917, dated July 6, 1897.

Application filed February 27, 1896. Serial No. 580,994. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR S. LANG, of Salem, county of Essex, State of Massachusetts, have invented an Improvement in Bicycle-Supports, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

It is the object of my invention to provide a bicycle-support adapted to be secured to the floor or wall of the sales-room or repair-shop or any other suitable place and which will hold a bicycle in desired position at any angle.

It is a further object of my invention to provide a support which will automatically retain and release a bicycle from its supported position without the use of any clamping devices to clamp against any portion of the bicycle.

My improvement may be applied at any convenient portion of the bicycle and is not only convenient for supporting the wheel when not in use, but is particularly serviceable in repairing the bicycle, supporting the same for such purposes at an angle so that the part of the bicycle to be repaired or adjusted may be readily reached.

In the accompanying drawings, illustrative of my invention, Figure 1 is a view showing in perspective my improved support in operative position to support a bicycle. Fig. 2 is an enlarged detail in perspective showing the base and adjustable connection of the bicycle-arm. Fig. 3 is a transverse vertical section taken on the line 3 3 of Fig. 2. Fig. 4 is a perspective view of the spring-actuated locking-pin.

In the preferred embodiment of my invention as herein shown A designates a suitable base adapted to be secured to the wall or floor of a room by any suitable means, as by the screws *a*. The extended portion of this base is centrally perforated to receive the clamping thumb-screw *a'*, by means of which is secured a casting B', provided at either end with ears, as *b b'*, disposed in planes at right angles to each other, the ear *b* being centrally screw-threaded to receive the thumb-screw *a'* and the ear *b'* being centrally perforated to receive the clamping thumb-screw *b²*.

To the ear *b'* is secured the supporting-arm

C, preferably by means of the plate C', which is provided at its lower end with a screw-threaded boss *c* to receive the thumb-screw *b²*.

A washer *c'*, of leather or other suitable material, is preferably interposed between the boss *c* and the ear *b'*, in order to provide suitable frictional retarding means, as hereinafter more fully explained, a similar friction device *c^x* being correspondingly provided between the ear *b* and base A.

The supporting-arm C is herein shown as formed in one piece by bending a length of small steel rod at its middle portion *c²* to form a loop, the two ends of which are suitably secured in the plate C'. However, it is not necessary to make the supporting-arm from metal rod, nor do I desire to restrict my invention to the loop form herein shown. Also, although I prefer to make the supporting-arm C in a loop formed with two parallel members *c³ c⁴*, yet for certain purposes it may be found preferable to omit one of these members and terminate the other member in a hooked portion at the end *c²*, or the end *c²* may be omitted and the supporting-arm may comprise the two parallel members *c³ c⁴*.

The casting B is preferably provided with locking means at one of its ends, the base A being herein shown as provided with a locking-pin D, carried in a suitable recess *d* in the said base A and adapted to rest at its lower conical end *d'* in suitable cavities *d²*, formed in the opposing side of the ear *b*. This pin D is provided near its lower end with a shoulder *d³*, adapted to receive the lower end of a spring *s*, held at its upper end under tension against the flange *d⁴* of the recess *d*.

At its upper end the pin D is provided with a suitable finger-hold *d⁵*, and adjacent thereto is a laterally-projecting lug *d⁶*, which normally rests within the recess *d*, but when it is desired that the locking-pin should be inoperative the pin is raised and partially rotated, so as to bring the lug *d⁶* against the upper surface of the base A, as shown in dotted lines in Fig. 3, thereby holding the same out of operative engaging position with the ear *b*.

In use my improved support is screwed or otherwise properly secured in suitable position on the floor or against the wall, and the clamping-screw *b²* is preferably tightened

against the washer c' . The supporting-arm C is then placed over any convenient portion of the wheel, being shown in Fig. 1 as placed over the front wheel of the bicycle.

5 When placed as shown in Fig. 1, the wheel is preferably turned slightly in the direction of the arrow, so as to carry the upper end c^2 of the supporting-arm between the fork of the handle-bar, as shown in dotted lines in Fig. 1.
10 By this means a rigid support is given to the bicycle, the supporting-arm being intermediately braced across the axle-bearings of the wheel.

If it is desired to swing the wheel around 15 close to the wall, the locking-pin D is raised and the thumb-screw a' is loosened, if necessary, (see Fig. 2,) the wheel then being swung around on the latter as a pivot and clamped in the desired position.

20 If it should be desired to oil the machine or adjust or repair any of the parts, the wheel may be tipped sidewise and firmly clamped in any desired position for that purpose.

The washer c' or other equivalent friction 25 device is preferably maintained in proper frictional engagement with the adjacent parts to obviate the necessity of otherwise clamping the parts, the frictional resistance of the device c' being sufficient to maintain the wheel 30 in its adjusted position and yet being such as to yield to severe pressure. When the supporting-arm is not in use, it may be swung up close to the wall out of the way.

While I have herein shown one particular 35 form of universal joint, I do not desire to be limited in this respect, inasmuch as any other form of joint may be substituted.

I do not desire to be restricted to the particular forms of clamping device or of friction 40 retarding device or locking device as herein shown, and for particular uses it may be advantageous to omit one or more of these devices.

Many other changes may be resorted to 45 without departing from the spirit and scope of my invention.

What I claim is—

1. A bicycle-support, comprising a base, a supporting-arm extending forward therefrom 50 and a substantially universal joint connecting said base and the rear end of said arm and permitting movement of the latter to support the bicycle in desired vertical or oblique position, substantially as described.

55 2. A bicycle-support, comprising a supporting-arm, a base, a joint connecting said base and arm and permitting movement of the lat-

ter to support the bicycle in desired position, and friction devices normally holding said parts in adjusted position, and permitting the 60 same to yield to severe pressure, substantially as described.

3. A bicycle-support, comprising an arm arranged at its free end to hook over a portion of the bicycle, a base adapted to be secured 65 to the floor or wall, and a universal joint connecting said arm and said base, substantially as described.

4. A bicycle-support, comprising a double-member arm arranged at its free end to hook 70 over a portion of the bicycle, and a base to which one end of said arm is freely jointed so as to swing up and down and laterally, said base being adapted to be secured to the floor or wall, substantially as described. 75

5. A bicycle-support, comprising an arm arranged at its free end to hook over a portion of the bicycle, a base adapted to be secured to the floor or wall, a joint connecting one end of said arm and said base, said arm extend- 80 ing forward from said base a distance adapting the same to extend approximately diametrically across a wheel of the bicycle, and means to maintain said arm in its adjusted position, substantially as described. 85

6. In a bicycle-support, a loop adapted to extend diametrically across and to hook over a wheel of the bicycle, and engage intermediate its length the axle of the wheel, and means to vary the angular position thereof, substan- 90 tially as described.

7. A bicycle-support, comprising a base, a supporting-arm having two members c^3 , c^4 , a pivot-bearing therefor in or parallel to the same plane with said members, and a second 95 pivot-bearing substantially transverse to the first-mentioned bearing, substantially as described.

8. A bicycle-support, comprising a loop secured at one end to a suitable base, and adapted 100 to extend straight across a wheel of the bicycle, said loop having its sides straight and close together and adapted to engage the axle of the wheel on either side thereof between the fork and wheel, the free end of the loop being 105 arranged to unyieldingly grip against the tire of the wheel, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR S. LANG.

Witnesses:

GILMAN MELCHER,
ARTHUR A. AVERILLE.