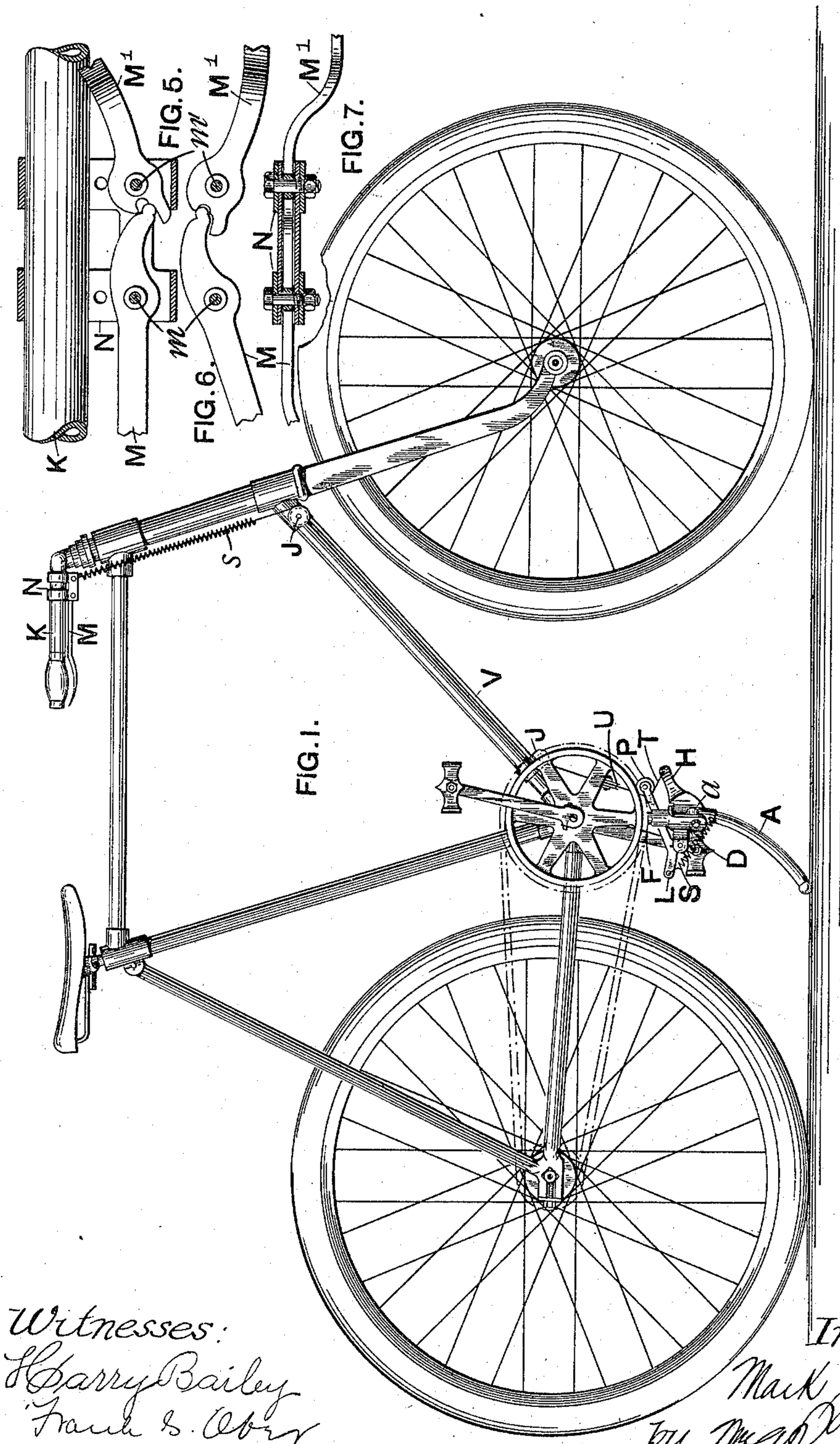
(No Model.) 2 Sheets—Sheet 1.

M. GOODMAN.

ADJUSTABLE SUPPORT FOR BICYCLES.

No. 584,585. Patented June 15, 1897.



Witnesses:
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Frank S. Obry

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(No Model.)

2 Sheets—Sheet 2.

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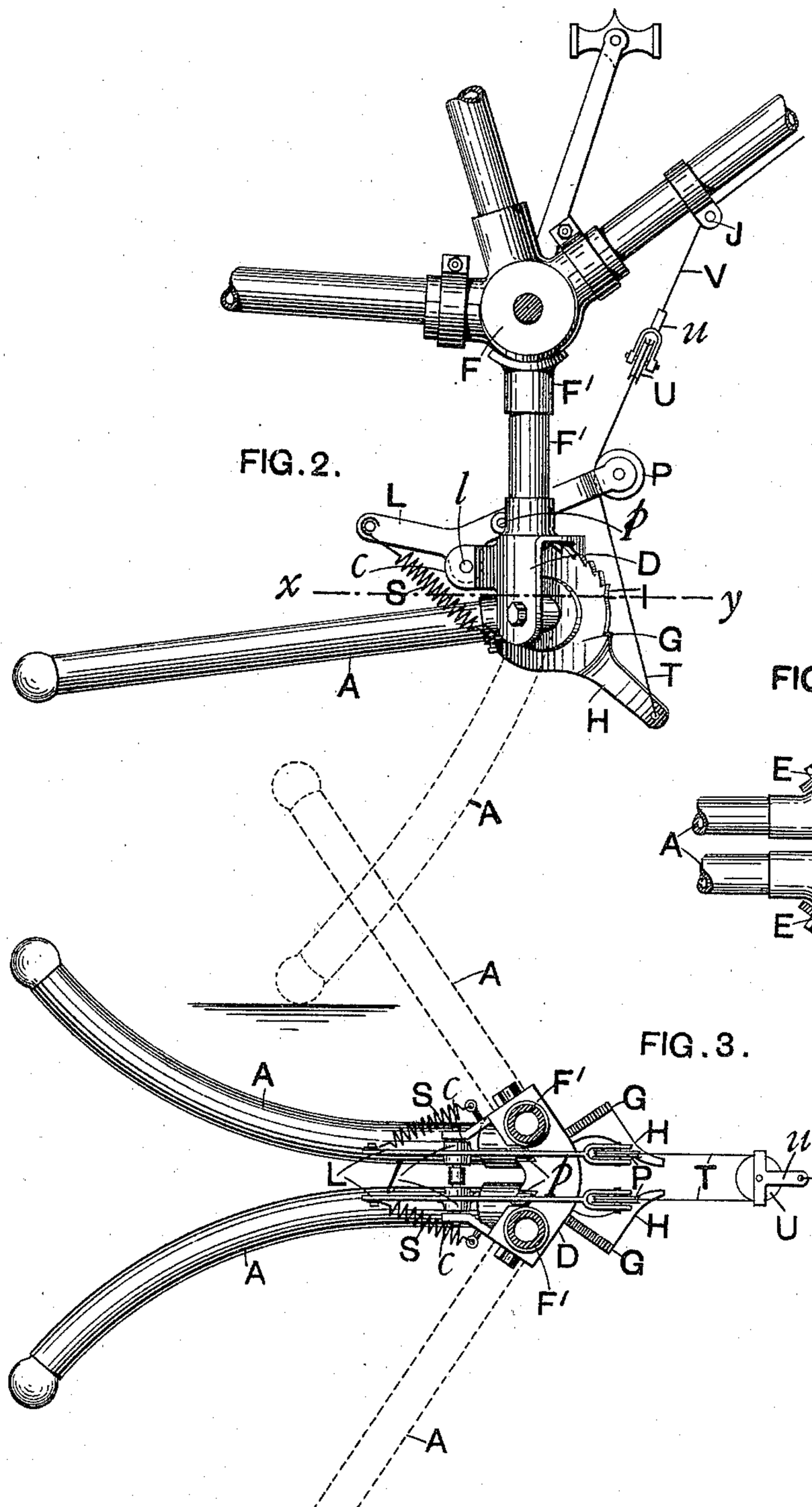

FIG. 2.

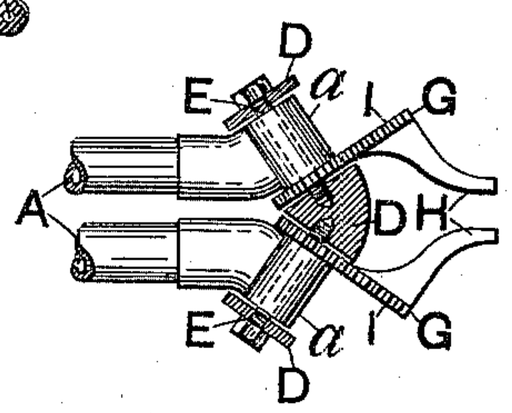

FIG. 4.

FIG. 3.

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UNITED STATES PATENT OFFICE.

MARK GOODMAN, OF LONDON, ENGLAND.

ADJUSTABLE SUPPORT FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 584,585, dated June 15, 1897.

Application filed September 30, 1896. Serial No. 607,435. (No model.) Patented in England April 28, 1896, No. 8,924.

To all whom it may concern:

Be it known that I, MARK GOODMAN, a citizen of the United Kingdom of Great Britain and Ireland, residing at Kensington, London, in the county of Middlesex, England, have invented certain new and useful Improvements in Adjustable Supports for Bicycles, (patented in Great Britain April 28, 1896, No. 8,924,) of which the following is a specification.

This invention relates to appliances or devices for supporting a bicycle when at rest in such a manner that the rider may temporarily leave the machine without other support or while still remaining upon the machine may keep it at rest safely while engaged in conversation or being otherwise occupied.

The appliance or device which is the subject of this invention has also the advantage that it is equally effective on level, sloping, or rough ground.

The accompanying drawings illustrate my improved appliance or device and are hereinafter referred to.

In the several figures similar letters of reference are employed to denote similar parts.

Figure 1 shows in elevation a bicycle having the appliance or device attached thereto. Fig. 2 illustrates in elevation, and Fig. 3 in sectional plan, the appliance or device drawn to a larger scale. Fig. 4 represents a horizontal section along the line *x y*, Fig. 2. Figs. 5, 6, and 7 show details of the lever which I prefer to employ for operating the device.

The principal parts of the new apparatus consist of two legs or struts A A with their accessories. These legs have at their upper ends tubes or sleeves *a a*, arranged at an angle to the upper part of each leg and each mounted upon an axis E, fixed at a corresponding angle in a carrier D. The outer parts of the legs may be curved or spread, so as to give a greater basis of lateral support in use. The carrier D may be conveniently attached to the crank-shaft hanger F of the machine by the two short tubes F′ F′. On the inner end of each of the sleeves *a a* there is fixed a plate G, provided with an extension-arm H and with a quadrant of ratchet-teeth I upon its edge. Each leg must consequently move with the plate attached to it. Above the carrier there are two levers L L, parallel with the plane of the machine, fulcrumed at *l* to two brackets or extensions *c c* from the sides of the carrier. Each of these levers carries a catch or detent pinned to the levers at *p* and arranged to engage with the ratchet-teeth on the plate. The forward end of each lever carries a small grooved pulley P, and its opposite end is connected by a spring, such as S, to the leg below it, as shown. The extension-arms H H are constructed, by preference, so that they come below the pulleys P P, as represented by Fig. 3.

The apparatus may be variously operated, but I prefer to employ the means illustrated. A cord T has its ends respectively attached to the two extension-arms H H. This cord passes around a pulley U, which is carried in a light frame *u*, to which the pull-cord V is attached. This pull-cord passes over small guide-pulleys J J, attached to the machine-frame, to the neighborhood of the handle-bar K, where its end is attached to the inner end of the inner member of a pair of articulated levers M M′. At some convenient point in the cord there is inserted a spiral spring or length of rubber cord *s*, the function of which is to permit the cord to be pulled up to the full length, whereupon the tension of the inserted spring S acts upon the legs and enables them to adjust themselves automatically. This adjustment is greatly aided by the arrangement of the cord T and pulley U, which permit the tension to be equally transmitted to the legs irrespective of their relative positions at any moment in use.

Although I attach importance to the cord and pulley and the spring inserted in the pull-cord, they are not essential, since two separate cords may be attached to the extension-arms in the same manner as the cord, and the two ends of these substituted cords may be connected and attached direct to the pull-cord.

Parts of the operating articulated levers M M′ are illustrated in elevation by Figs. 5 and 6 and in plan by Fig. 7. These levers may be carried by their fulcra *m m′* upon the clip N, which is fixed upon the handle-bar K.

They are preferably intergeared between their fulcra by means of a projection on the end of the outer lever engaging with a recess in the contiguous end of the inner lever M′.

If the projection and recess are shaped as shown by Figs. 5 and 6, they will, when the outer end of the lever M is forced upward, occupy and retain the position represented by Fig. 5 until released by the depression of the outer end of the lever M. The outer end of this lever is brought near to one of the handles of the machine, so that it may be readily moved by the hand of the rider similarly to the brake-handle. If the outer end of the outer lever M be raised, the inner end of the lever M′ will also be raised, and as the cord from the supporting apparatus is connected to the inner end of M′ the apparatus will be brought into action and will remain in action until the outer end of M is again pushed down.

When the cord is pulled by raising the lever M as above described, the legs are drawn down into the position shown by the full lines, Fig. 1, and by the dotted lines, Figs. 2 and 3. Owing to the angular position of the axis upon which the legs move, they at the same time open outward, and thus give a wider basis of lateral support to the machine. Should either of the legs come in contact with the ground before the other, as would frequently be the case, that leg, obviously, cannot be moved farther, while, nevertheless, the cord must still be further pulled to bring the other leg into contact with the ground. The springs S S provide for this, since any further pull upon the cord after the leg has come to rest operates to extend the spring. Thus perfect means are provided for plumbing the machine whatever may be the want of level in the surface of the ground upon which it is brought to rest. When each leg commences to move, its motion is communicated by the spring S to the lever L, and the catch or detent thereon is thereby lifted out of engagement with the ratchet-teeth on plate G.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

An apparatus for supporting a bicycle consisting essentially of a pair of legs mounted upon axes inclined to the vertical plane of the machine, each leg having attached thereto a plate carrying an extension-arm and having ratchet-teeth on its edge, and each leg being connected by a spring to a lever which carries a catch in engagement with the ratchet-teeth and a pulley over which a cord passes from the extension-arm to the operating-levers near the handle-bar of the machine, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of August, 1896.

MARK GOODMAN.

Witnesses:
J. G. TASKER,
FREDERICK JOHN BARTER COLLIS.