(No Model.)

G. P. OHLGART.

BICYCLE.

No. 589,394. Patented Aug. 31, 1897.

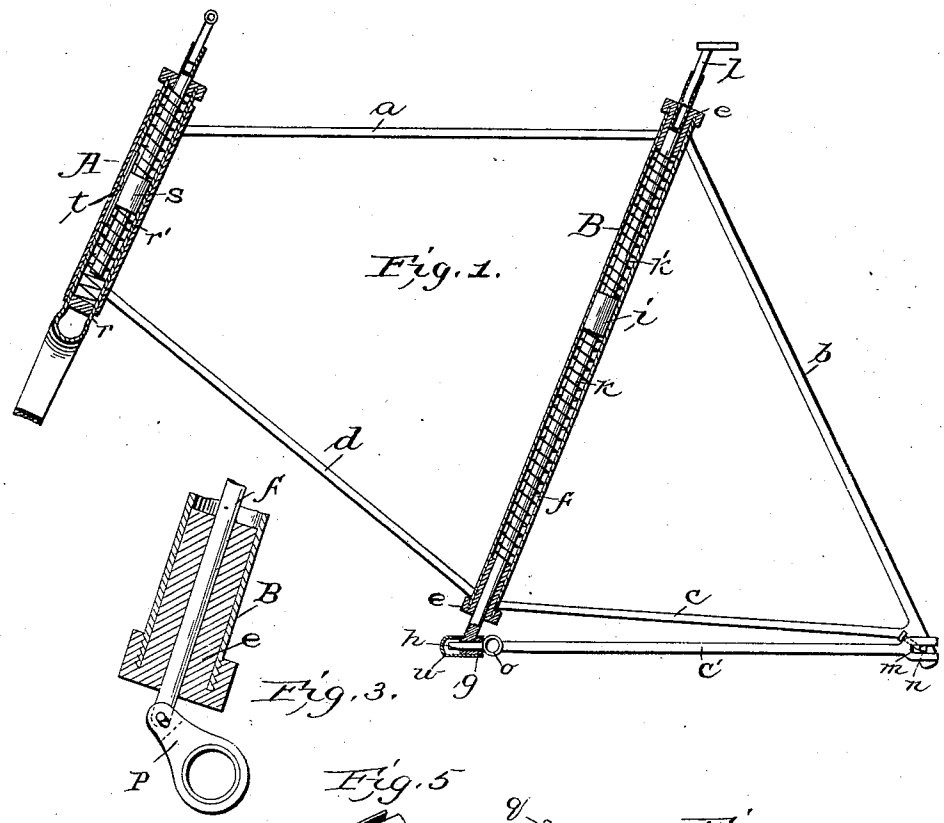


Fig. 1.

Fig. 3.



Fig. 5

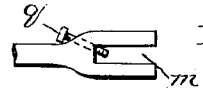


Fig. 4.

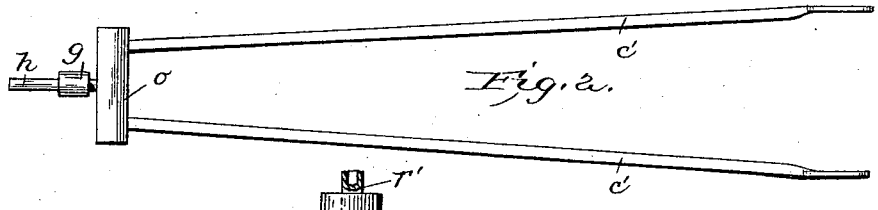


Fig. 2.

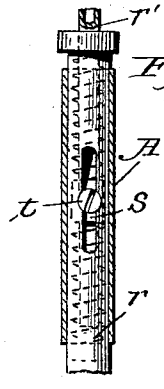


Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE P. OHLGART, OF BALTIMORE, MARYLAND, ASSIGNOR OF TWO-THIRDS TO HERBERT R. OLIVER AND CLIFTON E. KREBS, OF SAME PLACE.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 589,394, dated August 31, 1897.

Application filed June 8, 1896. Serial No. 594,719. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. OHLGART, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Bicycles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to bicycles, and particularly to the sustaining of the seat upon a spring, in order to relieve the rider from the unpleasant effect of shocks, due to the roughness of roads or any such cause.

The said invention consists, mainly, of a spring located in the central part or standard of the frame and in the peculiar construction and combination of the parts relating thereto. It is shown in the accompanying drawings, in which—

Figure 1 shows the frame in side elevation, with parts in section taken on a plane parallel with that of the frame. Fig. 2 is a plan view of a supplemental lower part of the frame. Fig. 3 shows a section of the lower part of the central part and parts connected, being a modification of Fig. 1. Fig. 4 shows a detail of construction. Fig. 5 is a detached detail perspective view of the cap *w*. Fig. 6 is a detail front elevation of the shank *r* with contiguous parts, the head being shown in section.

In the drawings, A represents the front bar or socket of the spindle for the front wheel. The main part is shown at B. The other bars *a b c d* are of ordinary construction. The main part or standard B is tubular, and is provided at each end with a plug *e*, having an axial perforation adapted to receive a freely-moving rod *f*, which at the lower end extends through the plug and is fixed to a sleeve *g*, arranged to have limited sliding motion on the stem *h* of the supplemental bar *c'*. On the rod *f* is a fixed collar *i*, located preferably nearer to the upper end, and above and below this collar are arranged coiled springs *k k'*, which at the inner ends bear on the collar and at the outer on the plugs. The lower spring bears the weight of the rider and should be of strength suited for that purpose. The upper spring *k'* is intended to take up any rebound of the lower spring. The rod *f* is made hollow at its upper end and is fitted to receive the stem or post *l* of the saddle.

The bar *c' c'* is pronged like the ordinary bar *c*, and the rear ends are slotted, as shown at *m*, to fit over and rest upon the shaft or axle of the rear wheel *n*, on which shaft the ends turn with the motion of the springs. In the cross-piece *o* of this bar is the sleeve which forms the bearing of the treadle-shaft, which is connected to the rear wheel in the ordinary manner, and the distance between the sprocket-wheels is always maintained. The stem on which the sleeve *g* slides is fixed to the cross-sleeve *o*. Instead of this the cross-sleeve may be provided with an arm *p*, as shown in Fig. 3, and to the end of this the rod *f* may be pivoted.

The weight of the rider resting on the lower spring any downward yielding moves the supplemental bar *c' c'*, which carries the treadles, and thus the distance between them and the saddle is always maintained, as well as the distance between the sprocket-wheels.

The slotted ends of the bar *c' c'* are on the inside of the pronged rear bars *b* and are provided with set-screws *q*, which serve to adjust the bar to keep the sprocket-chain taut.

The plugs are formed, as shown, to screw onto the ends of the standard.

The front bar or socket A is of ordinary construction; but the shank *r* of the wheel-fork is made hollow and has in it a rod or plunger *r'*, on which is a collar *s*, and it is held from turning in the shank by a set-screw *t*, fixed in the collar and moving in a slot in the shank. By this or any suitable device the plunger is allowed to reciprocate, but not to rotate in the shank.

Springs similar to those before described are around the plunger or rod, bearing on plugs above and below, so that the rod whether moving up or down moves against the tension for spring. On the upper end of the rod is fixed the ordinary handle, the lower spring sustaining the downward pressure of the weight thrown on it by the hands of the rider, and the upper spring takes up the rebound.

Whenever it is desired, as in racing, to prevent the movement of the springs, the set-

screws t may be adjusted to cause the head of the screw to bind against the shank r and thus hold the plunger r' against vertical movement.

On the end of the bar c' is fixed a hood w, which covers the sleeve g, and is formed with a slot on the upper side to allow the rod f to move. The hood serves to cover the parts and prevent dust from entering.

The above-described invention is adapted to all forms of cycles as well as that shown.

I claim—

1. In combination with the standard or seat-post tube of a bicycle-frame, a seat, means for supporting the same, the crank-box, the pivoted reaches carrying the same, and the sliding connection between said reaches and seat-supporting means, substantially as described.

2. In combination with the hollow seat-standard of a bicycle-frame, a rod extending entirely therethrough, a seat carried on the upper end of said rod, means located in said tube for flexibly holding said rod therein, means for guiding said rod to prevent the lateral movement thereof, the reaches pivoted on the axle of the rear wheel, the crank-box carried thereby, and the sliding connection between said reaches and rod, substantially as described.

3. The combination with the hollow head of a bicycle-frame, the handle-bar elastically supported therein and the binding-screw for rigidly clamping said handle-bar against vertical movement, but permitting the free rotary movement thereof, substantially as described.

4. In combination with the hollow head of a bicycle having a slot therein of the fork having the sleeve extension extending therethrough with a slot coinciding with the slot in said head, the handle-bar, the tube carrying the same flexibly held in said sleeve, and the binding-screw extending through the slot in said sleeve into said tube, the said screw being adapted to be moved to cause the head thereof to bind against the edge of said slot and hold said tube rigidly, substantially as described.

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

GEORGE P. OHLGART.

Witnesses:
HENRY E. COOPER,
MARGARET V. COOPER.