

(No Model.)

B. S. ROBERTS & W. MORTON.
ADJUSTING MEANS FOR CYCLE CHAINS.

No. 586,624.

Patented July 20, 1897.

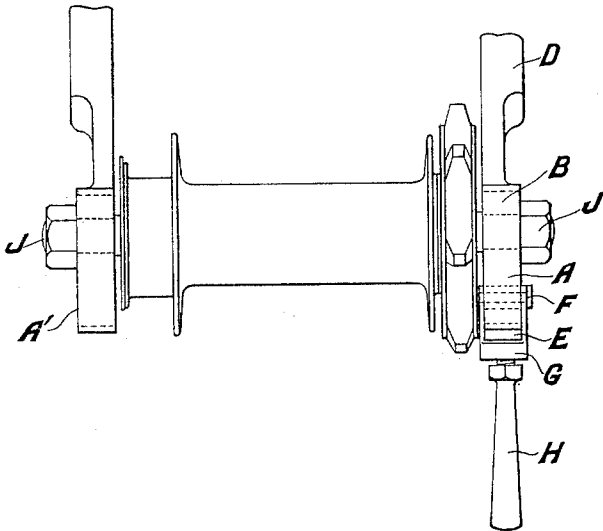


FIG. 1

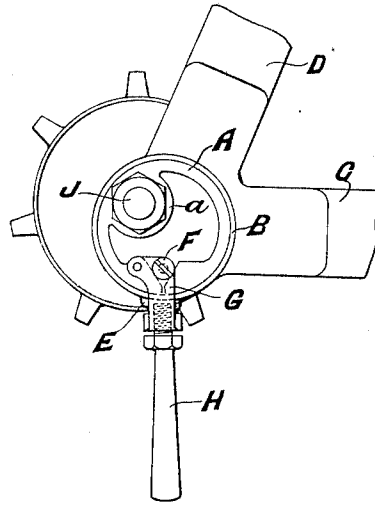


FIG. 2

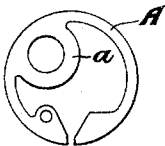


FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7



FIG. 8



FIG. 9



FIG. 10

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BENJAMIN SHAW ROBERTS, OF WINSON GREEN, AND WILLIAM MORTON,
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ADJUSTING MEANS FOR CYCLE-CHAINS.

SPECIFICATION forming part of Letters Patent No. 586,624, dated July 20, 1897.

Application filed September 10, 1896. Serial No. 605,399. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN SHAW ROBERTS, residing at 40 Bellefield Road, Winson Green, and WILLIAM MORTON, residing at Albert Street, Birmingham, in the county of Warwick, England, citizens of Great Britain, have invented certain new and useful Adjusting Means for Cycle-Chains, of which the following is a specification.

This invention consists of improvements relating to cycle-chain-driving gear, our object being to provide simple and convenient means for imparting a parallel movement to the driving-wheel axle for the purpose of adjusting the chain to the required degree of tension and for readily and effectually securing the axle in position after adjustment.

In order that our invention and the method of carrying the same into effect may be more readily understood, we append hereunto one sheet of explanatory drawings, to be hereinafter referred to.

Figure 1 is a front elevation, and Fig. 2 a side elevation, of the driving-wheel hub and chain-wheel of a bicycle fitted with our improved chain-adjusting gear. Fig. 3 is a side elevation, and Fig. 4 a front elevation, of the split ring or annular bearing-piece. Fig. 5 is a side elevation, and Fig. 6 a front elevation, of the forked clamping-bracket. Fig. 7 represents the tightening or adjusting screw. Fig. 8 is a side elevation, and Fig. 9 a front elevation, of the sliding bearing-piece or clipping-block. Fig. 10 illustrates the roller expanding-piece.

The same reference-letters in the different views indicate the same parts.

We screw the split ring or annular bearing-piece A into a boss B, which we carry from a bracket attached to the chain-stay C and to the hind fork D, the boss having an internal screw-thread for the reception of A and being so arranged that on its outer circumference a clipping-block E may slide when the inner split ring or annular bearing-piece A is moved round.

Within the split ring or annular bearing-piece A we form an eccentric keep or bearing-bed *a* for the fixed axle of the driving-wheel to rest in, and we also place within the inner portion of the split ring a roller or ex-

panding-piece F, which fits between the open or split ends of the ring in such a manner that when it is tightened or forced or pressed between such split ends the ring is expanded and made to bite or seize upon the inner circumference of the boss B, and thus to be made secure at any desired position.

We carry the roller or wedge-like piece F by means of a clamping fork-like bracket G, pivoted to the ring A, which passes over the outer rim or edge of the boss B and has a pin passing through its ends upon which the wedge or roller F is placed, and upon the outer ends of this bracket-piece we form a boss, through which a tightening or adjusting screw H passes to press down the bearing-piece or clipping-block E, which we place between the jaws of the bracket and which slides upon the outer face of the main boss B.

The annular bearing-piece A', opposite to the bearing-piece A, is not split, but it is provided with a keep or bearing-bed for the fixed axle similar to the keep or bearing-bed *a* in the split ring or annular bearing-piece A. The movement of the one ring A carries with it the ring A', both rings being bolted onto the ends of the axle J, as shown at Figs. 1 and 2, and thus the rings and the axle are all compelled to move together when the ring A is caused to turn in either direction for the purpose of adjustment.

When the chain-wheel axle J is placed within the bearing-beds on each side, we adjust the same to any desired position by releasing the screw H and turning the split ring A around by using H as a handle, thus giving a parallel movement to the axle in either direction until the desired degree of tension on the chain is obtained. We then screw down the block E onto the outer edge or rim of the boss B and so force apart the split ends.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination, with the cycle-frame, the sprocket with its axle, the solid bearing-ring on the frame, an expansible ring within the same carrying the axle and having the split ends and the hand-lever for spreading the expansible ring, said handle being pivoted to the ring and having a portion fitting be-

tween the split ends of the same substantially as described.

2. In combination with the cycle-frame, the sprocket with its axle, the solid bearing-ring on the frame, the expansible ring within the same carrying the axle and having the split ends, the lever having pivotal connection with the expansible ring and having a portion to operate between the split ends for expanding the same, said lever extending to the outside of the solid ring to clamp the parts in place against the same, substantially as described.

3. In combination, the frame, the solid bearing-ring, the expansible ring within the same and having the split ends, the sprocket-axle carried thereby, the lever formed in two parts one of which is for spreading the expansible ring having a portion to fit between the

split ends thereof, extending to the outside of the solid ring, the clipping-block E on the outside of said ring, said lever being adjustable to force the clip to clamp the parts.

4. In cycle-chain-adjusting devices the combination of a split or expansible ring or annular bearing-piece A screwed within the boss B of the cycle-framing, with a clipping-block E, a roller or expanding-piece F, a pivoted bracket G having a screw-threaded socket and a handle-screw H, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

BENJAMIN SHAW ROBERTS.

WILLIAM MORTON.

Witnesses:

EDWARD MARKS,

HERBERT BOWKETT.