No. 633,054. Patented Sept. 12, 1899.

W. J. TANNER.

HANDLE BAR.

(Application filed Sept. 23, 1898.)

(No Model.)

Fig. 1.

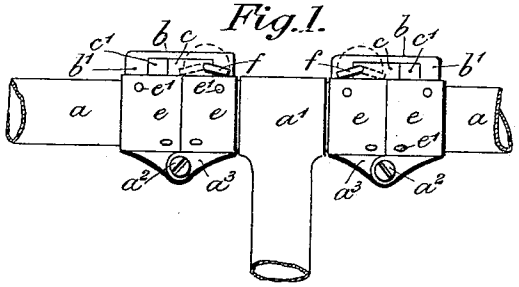


Fig. 7.

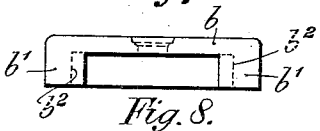


Fig. 8.

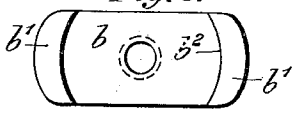


Fig. 2.

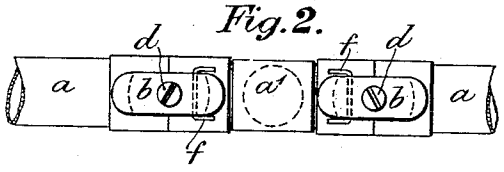


Fig. 3.

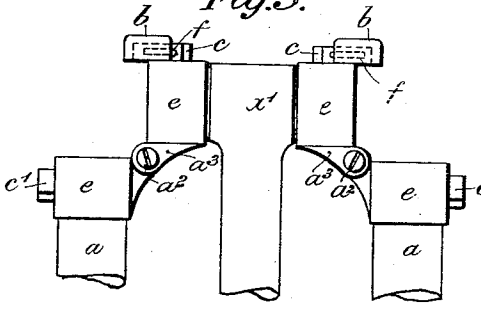


Fig. 6.

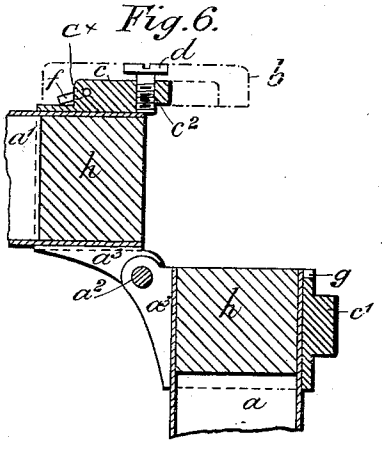


Fig. 4.

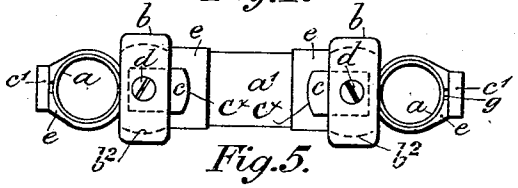
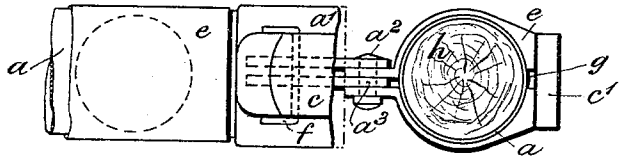


Fig. 5.



Witnesses

J. B. Tooley

Bruce A. Elliott.

Inventor

William J. Tanner

By James L. Norris.

Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM JOHN TANNER, OF LONDON, ENGLAND.

HANDLE-BAR.

SPECIFICATION forming part of Letters Patent No. 633,054, dated September 12, 1899.

Application filed September 23, 1898. Serial No. 691,719. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JOHN TANNER, a subject of the Queen of Great Britain, residing at London, county of Middlesex, England, have invented new and useful Locking-Joints for Holding Handle-Bars of Cycles, of which the following is a specification.

This invention relates to locking-joints for folding handle-bars of cycles, and is designed to provide a more simple and reliable form of joint than has heretofore been devised.

According to my invention the two parts, into which each half of the handle-bar is divided, are hinged together, and the hinge is locked by a swiveling button or clamp which can be turned around so as to fit over or embrace a pair of flat blocks or projections on the adjacent parts of the handle-bar. The swiveling button or clamp is pivoted to one of the blocks or projections, and one of these latter is so arranged that it projects beyond or overlaps the joint, so as to give greater strength and rigidity thereto.

Referring to the drawings, Figure 1 shows in side elevation so much of a folding handle-bar as is necessary to explain my invention, the parts being in their normal position. Fig. 2 is a plan thereof. Fig. 3 is an elevation showing the handles turned or folded down. Fig. 4 is a plan of the same. Fig. 5 is an enlarged view of a portion of Fig. 4, certain parts being omitted for sake of clearness. Fig. 6 is a vertical central section taken through one of the joints, also to an enlarged scale. Figs. 7 and 8 are respectively a side view and an inverted plan of one of the swiveling buttons or clamps.

$a\ a$ are the folding portions of the handle-bar, which are connected to the head a' of the handle-bar post through the medium of a hinge formed by pins a^2, passed through lugs a^3.

$b\ b$ are the swiveling buttons or clamps, whereby the joint is locked. These clamps are arranged on the opposite side of the handle-bar to the hinge-pin a^2 and are provided with turned-down ends b'

$c\ c'$ are the flat blocks or projections with which the swiveling clamps engage, one of these blocks being formed or secured on each of the adjacent parts of the handle-bar. The block c of each pair is longer than the block c'—say twice the length—and overlaps the joint, so as to give greater strength and rigidity and to allow the pin or pivot d, on which the button or clamp turns, to be held in its place immediately above the joint, the block c' being set back a corresponding distance to allow of the overlapping. The arrangement is such, however, that the two blocks fit snugly together when the parts of the handle-bar are in their normal position.

In the example shown the lugs a^3 of the hinges and the blocks $c\ c'$ are secured to collars or rings e, riveted to the handle-bars by rivets e'. Obviously, however, they may be secured directly to the handle-bars—say by brazing—and the collars or rings may be secured thereto in the same manner.

The longer blocks c have formed in them holes c^2 to receive the pins or screw-threaded pivots d, on which the clamps b turn, and these latter have the inner surfaces b^2 of their turned-down ends concentric with the said pivots, as are also the ends $c^\times$ of the blocks $c\ c'$. When the handle-bars are turned up into their normal position and are to be locked, the clamps b are simply turned so as to lie along them, as in Figs. 1 and 2, in which position the turned-down ends b' fit tightly against the ends of the blocks $c\ c'$, so holding the same rigidly together. To unfasten the joints, it is only necessary to turn the clamps b transversely of the handle-bar, as in Figs. 3 and 4, when the said bar can be turned down, as in the former of these figures.

To prevent any possibility of either clamp turning accidentally on its pivot, for instance, by vibration when the cycle is being ridden, I provide a safety-catch f, comprising a wire or the like passed through a suitable aperture in one of the blocks $c\ c'$. The ends of this wire are bent at right angles, so that they embrace the inner turned-down end of the respective swiveling button or clamp b. The said catch can, however, be turned back into the position shown in dotted lines, Fig. 1, when its button or clamp is to be disengaged.

A notch or recess g is formed in one part of

the joint, which fits around the pivot *d* and prevents the parts twisting or "working" relatively to each other.

The inner ends of the tubes forming the handle-bar may be plugged with blocks of wood *h*, if desired.

The locking-joint hereinabove described may be made and sold separately for application to existing folding handle-bars.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with the head of a handle-bar post, having rigid blocks, and folding handle-bar sections pivotally connected with said head and provided with rigid blocks, of horizontally-swiveling clamps each pivoted at its center and constructed at its ends to engage two of said blocks to hold a handle-bar section horizontally, and safety-catches mounted independent of the clamps and movable into engagement therewith to prevent said clamps accidentally turning horizontally on their central pivots, substantially as described.

2. The combination with the head of a handle-bar post, of a handle-bar section pivotally connected at its lower edge with said head and having on its upper side a block curved at the outer end, a block fixed on the upper side of the head and curved at its outer end, a pivot on one of the blocks, and a horizontally-swiveling clamp pivoted centrally between its ends on said pivot and constructed with pendent end portions having curved inner surfaces to engage the curved ends of said blocks, substantially as described.

3. The combination with the head of a handle-bar post, of a hinged handle-bar section having a rigid block, a rigid block arranged on said head and extended at one end to overlap the handle-bar section, and a horizontally-swiveling clamp pivoted centrally between its ends and constructed at said ends to swing around the outer ends of said blocks, substantially as described.

4. The combination with the head of a handle-bar post, and folding hinged handle-bar sections, of blocks mounted on the handle-bar sections, blocks mounted on said head, horizontally-swiveling clamps respectively pivoted centrally between their ends to two of said blocks, and swinging safety-catches pivotally mounted, respectively, in two of the blocks and constructed to swing into and out of engagement with said clamps, substantially as described.

5. In a locking-joint for folding handle-bars of cycles, the combination of a hinge-joint, a pair of blocks on the adjacent parts of the handle-bar, a swiveling button or clamp having turned-down ends, a pivot for said clamp screwed into one of said blocks, and a recess in the part carrying the other block, which recess embraces said pivot and has its edges in contact therewith when the folding handle-bar is horizontal, substantially as and for the purpose described.

6. In a locking-joint for folding handle-bars of cycles, the combination of a block on one part of said bar adapted to project onto the other part thereof, a second block on this latter part abutting against the first block, a pivot-pin in one of the blocks, curved ends on said blocks concentric with the pivot-pin, a horizontally-swiveling clamp mounted on said pin, and turned-down ends on said clamp adapted to engage the curved ends of the blocks, substantially as described.

7. In a locking-joint for folding handle-bars of cycles, the combination of a block on one part of said bar, extended at one end to project onto the other part thereof, a second block on this latter part abutting against the first block, rings or collars secured to the parts of the handle-bar and carrying said blocks, a pivot-pin in one of the blocks, curved ends on said blocks concentric with the pivot-pin, a swiveling clamp mounted on said pin, and turned-down ends on said clamp adapted to engage the curved ends of the blocks, substantially as described.

8. In a locking-joint for folding handle-bars of cycles, the combination of a pair of blocks one on each of the parts of the bar, a swiveling clamp pivoted on one of the blocks, and serving to lock them together, and a wire passed through one of the blocks and provided with bent ends to form a safety-catch and prevent disengagement of the clamp, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM JOHN TANNER.

Witnesses:

GEORGE ERNEST MINTERN,

FRED C. HARRIS.