

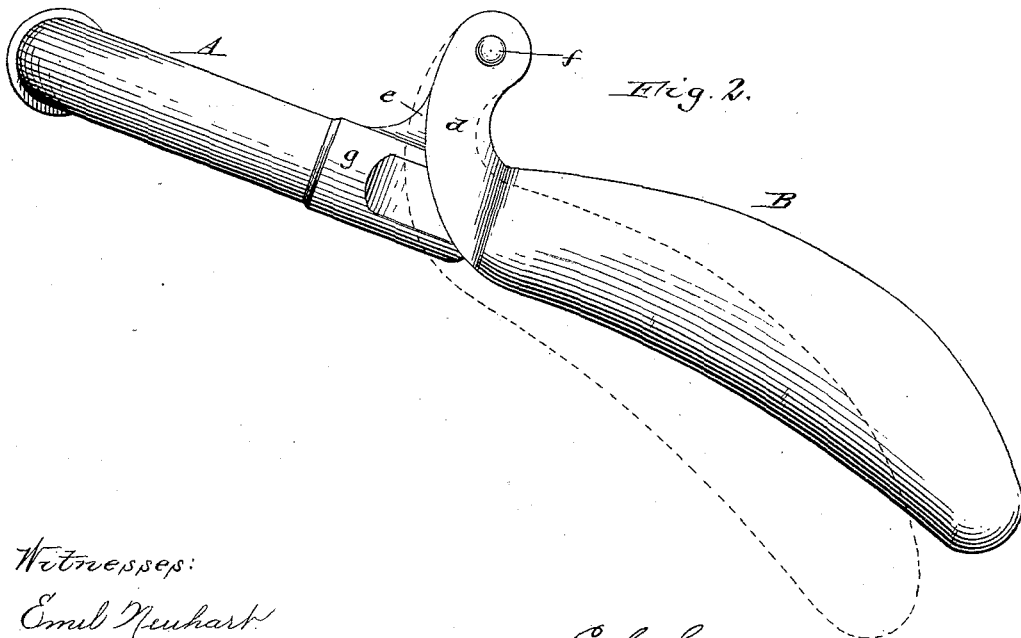
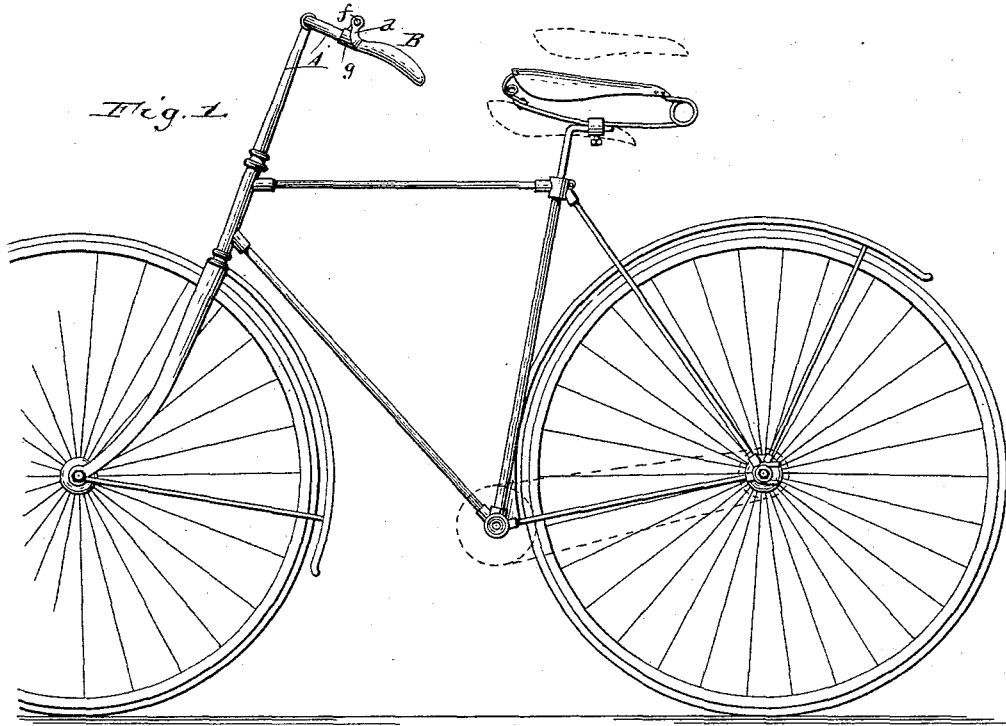
(No Model.)

2 Sheets—Sheet 1.

E. G. LATTA.
HANDLE FOR VELOCIPEDES.

No. 452,577.

Patented May 19, 1891.



Witnesses:

Emil Neubart
Theo. L. Popp.

E. G. Latta Inventor.
By Wilhelm Hornum Attorneys.

UNITED STATES PATENT OFFICE.

EMMIT G. LATTA, OF FRIENDSHIP, NEW YORK.

HANDLE FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 452,577, dated May 19, 1891.

Application filed February 2, 1891. Serial No. 379,382. (No model.)

To all whom it may concern:

Be it known that I, EMMIT G. LATTA, a citizen of the United States, residing at Friendship, in the county of Allegany and State of New York, have invented new and useful Improvements in Velocipede-Handles, of which the following is a specification.

This invention relates to velocipede-handles, and has for its principal object to produce a handle which affords a comfortable grasp in different positions of the saddle without requiring the use of an adjustable handle-bar.

My invention has the further object to render the handle anti-vibrating in a simple manner, so as to absorb the vibrations of the machine and relieve the rider's hands.

In the accompanying drawings, Figure 1 is a fragmentary side elevation of a velocipede provided with my improved handles. Fig. 2 is a side elevation of the handle and handle-bar on an enlarged scale. Fig. 3 is a longitudinal section of said parts. Fig. 4 is a bottom plan view of the handle. Figs. 5, 6, 7, and 8 are cross-sections thereof in lines *w w*, *x x*, *y y*, and *z z*, Fig. 3, respectively. Fig. 9 is a longitudinal section of a modified construction of the handle.

Like letters of reference refer to like parts in the several figures.

A represents the end portion of the handle-bar, which is bent backwardly, as shown, and B is the body of the handle, preferably constructed of hard rubber or similar material, but which may be constructed of hard wood if a handle of a cheaper grade is desired.

The handle B is provided with a longitudinal bore or opening *b*, extending from the front end of the handle rearwardly into the body thereof, and which is preferably lined with a sleeve or bushing *c*.

D is a tang or shank secured in the sleeve of the handle by a screw-thread or other means, and which is pivoted to the backwardly-bent end of the handle-bar, so that the handle may move downwardly and forwardly in the handle-bar, as indicated by dotted lines in Fig. 2.

The handle-shank D is provided at its front end with upwardly-projecting jaws or arms *d d*, and the handle-bar is provided at its end with an upwardly-projecting lug or

standard *e*, arranged between the jaws of the handle-shank and to which the jaws of the handle are pivoted by a transverse bolt *f*. The lug or standard *e* is formed in a socket or sleeve *g*, secured to the end of the handle-bar. The lower front portion of the handle-shank is recessed, as shown in Figs. 2 and 4, to permit the handle to move downwardly and forwardly beyond its normal position.

H represents a flat spring secured to the end of the tubular handle-bar, preferably within the same, as shown, and which resists the movement of the handle upon the handle-bar. The free arms or branches of this spring project into the tubular shank of the handle, and the upper long arm *h* bears against the upper inner side of the shank, so as to resist the downward movement of the handle, while the lower short arm *h'* bears against the lower inner side of the shank, so as to oppose the upward movement of the handle. The lower arm of the spring, being comparatively short, is practically rigid and limits the upward pull on the handles, while the upper long arm of the spring is sufficiently elastic to permit the handle to move forward and downward concentrically with its pivot, thereby cushioning the handle and relieving the arms and hands of the rider from the vibrations of the machine.

By locating the handle-pivots above the handles and in front of the same, as shown, the handles move forwardly and downwardly in the direction in which the weight and momentum of the arms naturally cause them to move when the steering-wheel rises in passing an obstruction. The handle pivots may, however, be located at the surface of the handles, if desired, which position will answer fairly well.

It is customary to make the saddle adjustable forwardly and backwardly to a slight extent and vertically adjustable about six or eight inches, and it is also usual to provide an adjustable handle-bar and a brake-lever whose range of adjustment is about half that of the saddle. It is necessary to make the saddle adjustable to suit riders of different stature, but within certain limits the adjustment of the handle-bar is unimportant, as it can be used with the same adjustment by

most adult riders so long as the handles are set at the proper angle. Handles of the ordinary style, however, frequently occupy an improper and uncomfortable angle, and to overcome this difficulty my improved handle is curved backwardly and downwardly, the handle being somewhat longer than ordinary handles and its upper side being curved to a shorter radius than its under side, as shown. By this construction the handle presents a variety of inclinations to the rider's hand without requiring its position to be changed, it being only necessary for a tall rider to grasp the handle farther forward and for a short rider to seize it farther backward to obtain a comfortable grip.

By the use of my improved handle the weight and expense of an adjustable handle, as well as of the adjustable connection between the brake and its operating-lever, are saved, and the rider also saves the time required to make adjustments in case the same machine is used by persons of different stature.

If the anti-vibrating feature of the handle is not desired, the lining-sleeve of the handle is screwed directly upon the end of the handle-bar, or it may be otherwise secured thereto.

If the spring feature is not employed, the end of the handle-bar may be bent as shown in Fig. 9, and an ordinary straight rubber handle be applied thereto by softening the same by heat and slipping it over the bent end of the handle-bar. The heated rubber handle in being passed over the curved end of the handle-bar conforms to the curve of the bar, and upon cooling it becomes tightly fastened to the bar. In this modified construction the upper side of the handle is convex and the lower side concave, as in the first-described construction. By curving the upper side of the handle to a smaller radius than its under side, as shown, the tendency of the hand to slip forward and backward on the handle is largely reduced, while at the same time avoiding cramping of the fingers in lifting on the handle.

The handle is preferably provided with a covering of leather stretched over the handle and secured thereto by sewing or otherwise. In the construction shown the covering is secured to the handle by a row of stitches *i*, extending lengthwise along the under side of the handle, as illustrated in Figs. 3 and 4. A

handle having a leather covering is less liable to blister the hands than an ordinary handle, it avoids the necessity of polishing the handle, and it is less liable to become injured. It also enables handles to be made of different sizes by employing leather covers of varying thickness.

For first-class handles the body is preferably constructed of hard rubber and the leather cover is sewed to the handle, while for less expensive handles the body is made of hard rubber and the cover is cemented to the handle.

I claim as my invention—

1. The combination, with a backwardly-bent handle-bar, of a handle having its rear portion curved backwardly and downwardly, substantially as set forth.

2. The combination, with a backwardly-bent handle-bar, of a curved handle having its upper side curved to a smaller radius than its lower side, substantially as set forth.

3. The combination, with a backwardly-bent handle-bar, of a handle having its rear portion curved backwardly, a pivot connecting the handle to the handle-bar and located above the front end of the handle, and a spring which resists the movement of the handle on the handle-bar, substantially as set forth.

4. The combination, with a backwardly-bent handle-bar, of a handle having its rear portion curved backwardly and downwardly and pivoted at its front end to the backwardly bent end of the handle-bar, whereby the movement of the handle is downwardly and forwardly, and a spring which resists the movement of the handle on its pivot, substantially as set forth.

5. The combination, with the tubular handle-bar and the handle pivoted to the handle-bar and having a bore or cavity, of a spring arranged within the tubular handle-bar and having an arm bearing against the upper side of the cavity of the handle and an arm bearing against the lower side of said cavity, substantially as set forth.

Witness my hand this 29th day of January, 1891.

EMMIT G. LATTA.

Witnesses:

HERMAN RICE,
WM. H. KING.