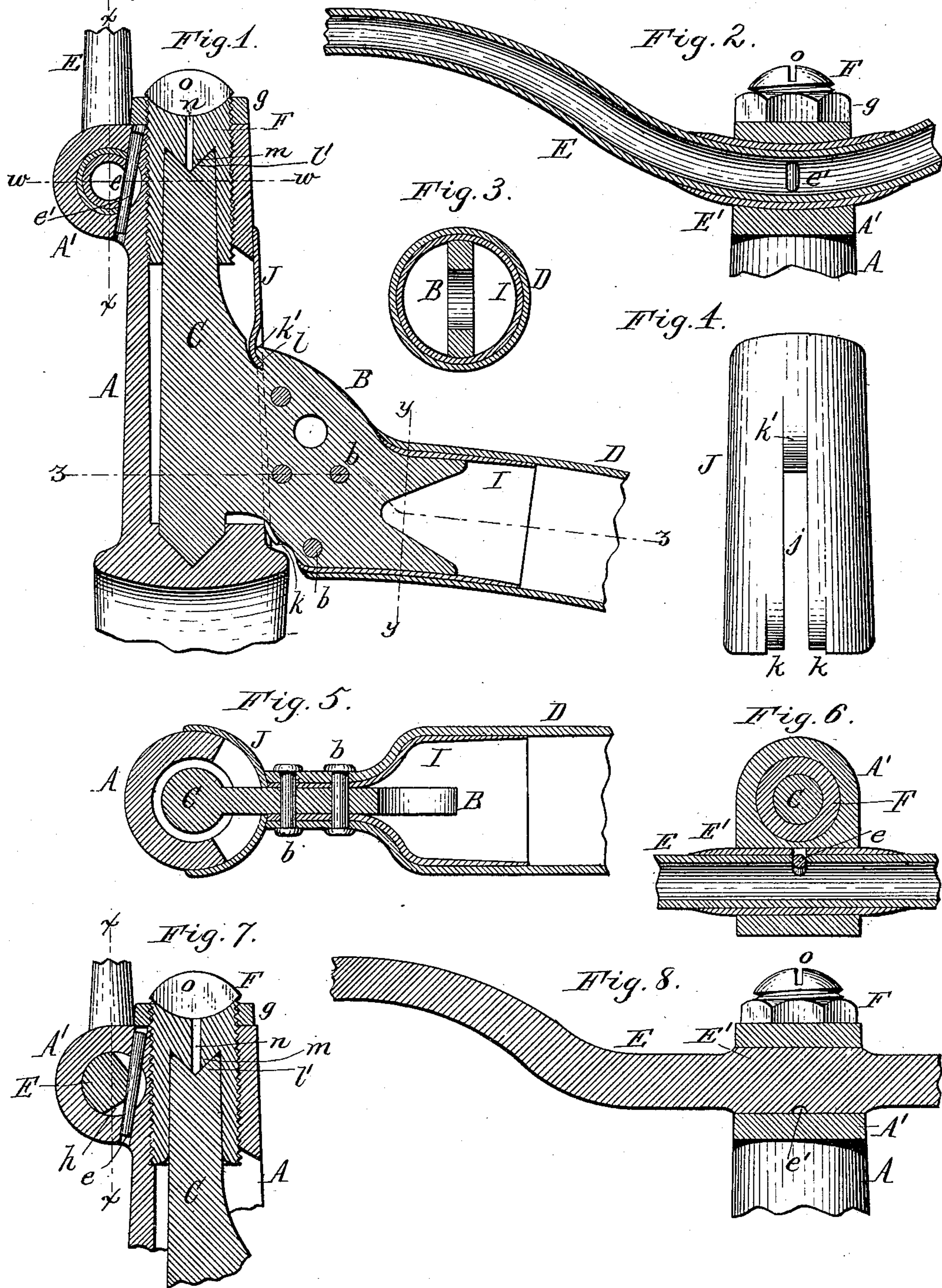


(No Model.)

E. G. LATTA.
VELOCIPED.

No. 332,092.

Patented Dec. 8, 1885.



Theodore L. Popp.
Chas. Buchheit } Witnesses.

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

UNITED STATES PATENT OFFICE.

EMMIT G. LATTA, OF FRIENDSHIP, NEW YORK, ASSIGNOR OF ONE-HALF TO
ADRIAN C. LATTA, OF SAME PLACE.

VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 332,092, dated December 8, 1885.

Application filed May 12, 1885. Serial No. 165,250. (No model.)

To all whom it may concern:

Be it known that I, EMMIT G. LATTA, of Friendship, in the county of Allegany and State of New York, have invented new and useful Improvements in Velocipedes, of which the following is a specification.

This invention relates to an improvement in the means for securing the handle-bar to the lug of the steering-head, whereby a rigid handle-bar is secured in a one-part lug in a simple and secure manner, and made easily removable; also, to an improvement in the means for securing the neck to the backbone, whereby greater strength is secured and the weight reduced; also, to an improved construction of the dust-shield, whereby the same is rendered self-locking, and also to an improvement in the spindle and steering-head, whereby the upper center is easily oiled and a long spindle is provided without increasing the height of the steering-head.

My invention consists to these ends of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of the steering-head and connecting parts. Fig. 2 is a vertical cross-section in line *x x*, Fig. 1. Fig. 3 is a vertical cross-section in line *y y*, Fig. 1. Fig. 4 is a rear elevation of the dust-shield. Fig. 5 is a horizontal section in line *z z*, Fig. 1. Fig. 6 is a horizontal section in line *w w*, Fig. 1. Fig. 7 is a longitudinal sectional elevation of the upper part of the steering-head provided with a solid handle-bar. Fig. 8 is a vertical cross-section in line *x x*, Fig. 7.

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

A represents the steering-head; A', the handle-bar lug formed on the front side of the same; B, the neck; C, the spindle, and D the backbone.

E represents the handle-bar, composed of one rigid bar curved to the desired form and finished complete before being attached to the steering-head. The handle-bar may be formed of a bent tube, as represented in Figs. 1 and 2, or it may be made solid, as represented in Figs. 7 and 8. The opening in the handle-bar lug A' is made somewhat larger than the body

of the handle-bar E, so that the curved bar can be readily passed through the opening of the lug, the handle being of course removed from the bar.

E' represents the central portion of the handle-bar, which is sufficiently enlarged to fit in the opening of the handle-bar lug A'. This enlargement may be formed on the bar by securing a short tube to the outer side of the bar, as represented in Figs. 1 and 2, or it may be formed in forging the solid bar, as represented in Figs. 7 and 8. The opening through the handle-bar lug may be made straight or curved, as desired; but when it is curved the handle-bar can be passed through a smaller opening than if the opening is straight. The upward curve of the handle-bar can be arranged closer to the handle-bar lug, thus giving a better form to the bar and affording a neater and more compact build; but the curved opening is more expensive and confines the handle to one position.

e represents a key or tapering bolt which is secured in the steering-head, and passes through a seat, *e'*, in the handle-bar, thereby securing the handle-bar in the lug A'.

F represents a tubular screw which is screwed into the upper end of the steering-head, and *g* represents a screw-nut which is applied to the screw F and bears upon the upper end of the steering-head. This screw-nut covers the upper end of the key *e* and confines the latter in its seat. The key *e* wedges the handle-bar in the lug and securely holds the former in place. When the center portion, E', of the handle-bar is made straight, as represented in Figs. 7 and 8, it may be provided with a number of faces, *h*, arranged in various positions and each adapted to bear against the wedge *e*, so that upon removing the wedge or key and turning the handle-bar in the lug to bring either of these faces in line with the key the handle-bar may be secured in one of several different positions, thereby turning the handles upwardly or forwardly, as may be desired. Upon removing the key *e* the handle-bar is readily withdrawn from the handle-bar lug.

It is obvious that the handle-bar may be secured in the lug by any of the well-known

devices usually employed for this purpose, and that the handle-bar lug may be split and the handle-bar clamped therein by a clamping-screw, if desired; but I prefer the employment of the key, as described. The neck B is made flat, or of the same thickness throughout its length, as represented in Fig. 5, and the front end of the backbone D is contracted, as shown in the same figure, and secured to the flat neck B by rivets *b*, or by brazing, as may be preferred.

I represents a lining composed of a flat tube, or a piece of sheet metal bent to form a tube, and arranged in the front end of the backbone D, between the latter and the neck B, whereby the front end of the backbone is strengthened. This construction forms a very strong connection between the neck and backbone, with less weight than usual, and permits the neck and spindle to be quickly and cheaply detached from the backbone, if desired.

J represents the dust-shield, which is made of spring metal in substantially the usual form, and *j* represents the ordinary slit or opening formed in the dust-shield for the passage of the neck B. The shield J is provided at its lower end, on both sides of the opening *j*, with springs *k*, which are formed by slitting the dust-shield vertically, and which springs bear under the lower front portion of the neck B, as represented in Fig. 1, to hold the shield down and its lower end against the steering-head. The shield J is also provided above the opening *j* with a spring *k'*, which is also formed by slitting the shield, and which enters a recess, *l*, in the top of the neck B, and holds the upper end of the shield against the steering-head. The shield may be removed by pressing it upward with sufficient force to compress the springs *k k'*; but when the spindle is only partly inserted in the steering-head it may be applied or removed without compressing the springs.

The whole construction is simple, cheap, and noiseless, and free from small parts which are likely to be lost.

It is obvious that either the springs *k* or the spring *k'* will hold the shield in place fairly well, and that the lower springs, *k*, may be twisted to enter notches in the sides of the neck, or that the latter may be provided with projections against which the spring may be made to engage.

l' represents a conical recess formed in the upper end of the spindle C, and *m* is a conical center formed in the screw F at the upper end of its bore or cavity, so as to enter the recess *l'* and turn in the same, while the lower tubular portion of the screw F embraces the upper portion of the spindle, in the usual manner.

n is a vertical oil-duct formed centrally in the screw F, and opening at the apex of the center *m*.

o is the slot formed in the upper end of the screw F for the reception of a screw-driver or similar tool, and having its bottom curved

or inclined from its end downwardly to the oil-duct *n*, so that the oil poured into the slot *o* will be conducted to the oil-duct, and by the latter to the contiguous surfaces of the center *m* and conical bearing *l'*. The conical bearing *l'* tends to retain the oil near the center of the bearing in an obvious manner. The screw F is made comparatively short at its upper end, and is but slightly elevated above the upper end of the steering-head.

I do not wish to claim in this application the general features of the key-fastening of the handle-bar which are claimed in my pending application for patent, No. 129,763, filed April 29, 1884.

I claim as my invention—

1. The combination, with the handle-bar lug, of a handle-bar having curved end portions capable of being freely passed through the lug, and an enlarged central portion which supports the bar in the lug, substantially as set forth.
2. The combination, with the handle-bar lug provided with an opening curved lengthwise, of a curved handle-bar seated in said opening, substantially as set forth.
3. The combination, with the handle-bar lug, of a tubular handle-bar provided with a central tubular enlargement which is seated in the handle-bar lug, substantially as set forth.
4. The combination, with the steering-head and handle-bar lug, of a handle-bar seated in said lug, a key whereby the handle-bar is secured in said lug, and a screw-nut applied to the steering-head, whereby the key is concealed, substantially as set forth.
5. The combination, with the steering-head A, handle-bar lug A', and center screw, F, of the handle-bar E, key *e*, and the screw-nut *g*, applied to the upper end of the steering-head and concealing the key, substantially as set forth.
6. The combination, with the spindle C and flat neck B, of the tubular backbone D, provided with a contracted front end, *b*, which is secured to the sides of the neck, substantially as set forth.
7. The combination, with the spindle C and flat neck B, of the tubular backbone D, provided with a contracted front end, *b*, and a tubular lining interposed between the front end of the backbone and the neck, substantially as set forth.
8. The combination, with the steering-head and neck, of a dust-shield composed of spring metal, and provided at its lower end with springs *k*, formed integral with the shield, and engaging with the neck to hold the shield against upward movement, substantially as set forth.
9. The combination, with the steering-head and neck, of a dust-shield composed of spring metal, and provided above the neck with a spring, *k'*, formed integral with the shield and engaging in the neck, substantially as set forth.

10. The combination, with the steering-head and neck, of a dust-shield composed of spring metal and bearing against the neck, whereby the shield is held in position, substantially as set forth.

11. The combination, with the steering-head, of a spindle provided at its upper end with a conical recess, *l'*, a hollow center screw, *F*, provided at the upper end of its bore with a
10 conical center, *m*, seated in said recess, substantially as set forth.

12. The combination, with the steering-head, of a spindle provided at its upper end with a conical recess, *l'*, and a center screw, *F*, provided with a conical center, *m*, a central oil- 15 duct, *n*, and a slot, *o*, depressed toward the oil-duct, substantially as set forth.

Witness my hand this 8th day of May, 1885.

EMMIT G. LATTA.

Witnesses:

M. W. POTTER,
FRED. H RICE.