(No Model.)

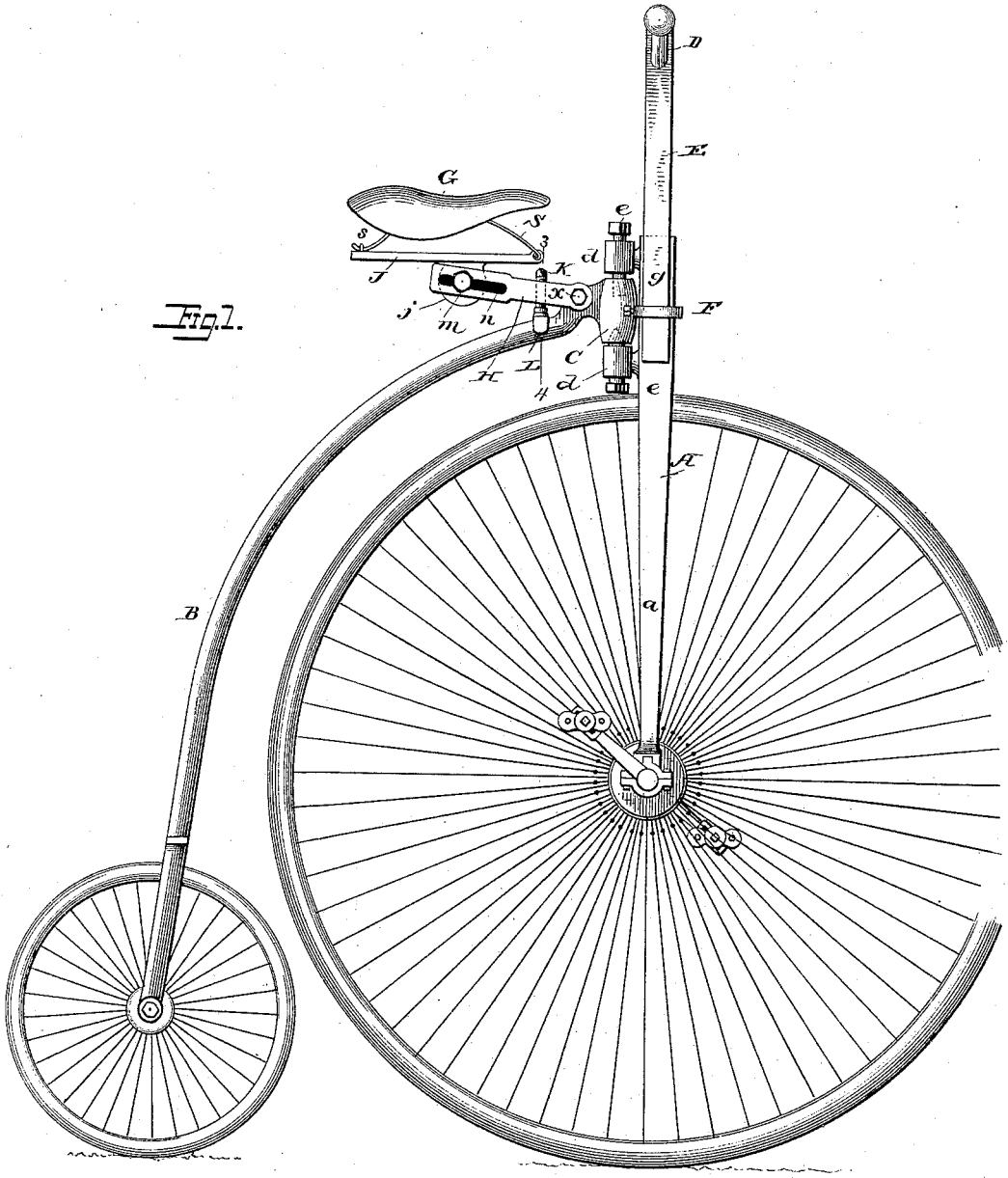
2 Sheets—Sheet 1.

H. B. HART.

VELOCIPEDE.

No. 385,620. Patented July 3, 1888.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

H. B. HART.

VELOCIPEDE.

No. 385,620. Patented July 3, 1888.

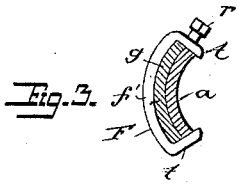


Fig. 3.

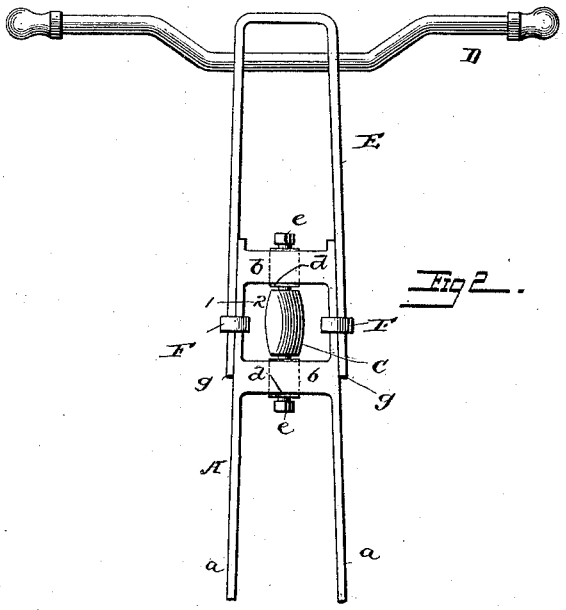


Fig 2.

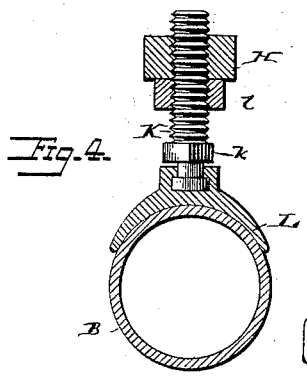


Fig. 4.

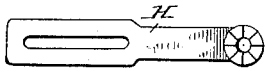
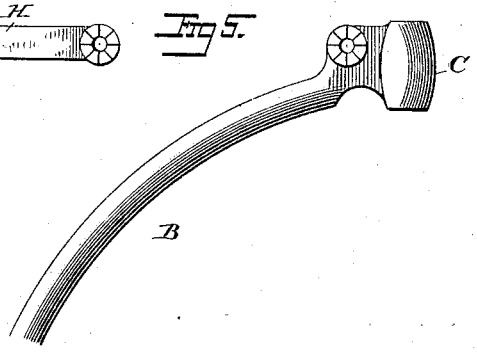


Fig 5.



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UNITED STATES PATENT OFFICE.

HARRIE B. HART, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE HART CYCLE COMPANY, OF SAME PLACE.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 385,620, dated July 3, 1888.

Application filed April 6, 1888. Serial No. 269,890. (No model.)

To all whom it may concern:

Be it known that I, HARRIE B. HART, a citizen of the United States, residing at Philadelphia, Philadelphia county, State of Pennsylvania, have invented certain new and useful Improvements in Velocipedes, of which the following is a full, clear, and exact specification.

My invention is an improvement in that class of velocipedes in which the parts are relatively adjustable to adapt the machine to the rapid growth of children or to riders of different sizes; and my invention consists in the construction hereinafter fully set forth, whereby I am enabled to provide a more ready and extended adjustment of the parts than has heretofore been possible.

In the drawings, Figure 1 is a side elevation of a velocipede illustrating my invention. Fig. 2 is a front elevation of part thereof. Fig. 3 is an enlarged cross sectional view taken on the line 1 2 of Fig. 2. Fig. 4 is an enlarged section on the line 3 4 of Fig. 1, showing in detail the means for adjusting the saddle; and Fig. 5 is a detail view.

The main frame of the machine consists, as usual, of a front fork, A, and a tubular backbone, B, pivotally connected to the fork and bifurcated at its rear end, and this frame is mounted upon either two or three wheels, as desired. The fork A is preferably constructed of two concavo convex side bars or legs, *a a*, arranged substantially parallel to each other and rigidly connected at their upper ends by two bridge-pieces, *b b*, which are provided with rearwardly-projecting lugs enlarged to form hubs *d d*, through which extend screws or other adjustable bearings, *e e*, for the neck C of the backbone.

To provide a ready and extended adjustment of the handle-bar D, to vary its relation to the saddle G and the pedals of the front wheel, I mount said bar in a yoke-shaped bracket, E, constructed to straddle the front fork, A, and this bracket I adjustably secure to the sides of the fork by any suitable means, but preferably by clamps F F. (Best shown in Fig. 3.) The side bars *g g* of the bracket are concavo-convex in cross-section, so as to conform to and lie closely against the correspondingly-shaped legs *a a* of the front fork, the curvature of the parts furnishing increased rigidity and serving as a guide to maintain them in proper relation.

The clamps F F for locking the bracket to the fork consist each of a yoke, *f'*, fitting the outer face of the bracket, as shown, and terminating at its opposite extremities in lips or flanges *t t*, arranged to embrace the adjacent edges of the legs *a a* and arms *g g*, and a screw, *r*, carried by one of said flanges, is adapted to be brought forcibly against said edges to firmly lock the parts together.

It will be seen that the handle-bar may be easily and quickly adjusted to any extent required in the ordinary use of the machine by simply loosening the clamps to permit the supporting-bracket to move upon the fork, and after the desired adjustment is made the parts may again be locked immovably in place by tightening the clamps, as before described.

To permit a corresponding adjustment of the saddle G with respect to the handle bar D and the pedals of the propelling and steering wheel, I mount the saddle upon the rear or free end of a supporting-bar, H, which is pivoted at its opposite end to the neck of the machine by a bolt, *x*, so as to be capable of being swung upon its pivotal connection to elevate or depress the saddle, as desired, and the said bar may then be secured in its adjusted position in any appropriate manner.

The means preferred and illustrated by me for locking the bar H in position after adjustment consist in roughening or corrugating the adjacent faces of the neck and bar, as shown in Fig. 5, so that by tightening the bolt *x* the parts are immovably secured.

To relieve the bar H of the great strain which would otherwise be imposed upon it at the point of connection with the backbone were the corrugations alone relied upon for maintaining the bar in its adjusted position, I employ an adjustable supplemental support—as, for instance, a screw, K, fitting a threaded opening in said bar and swiveled at its lower end in a U-shaped foot-piece, L, resting upon the backbone, thus forming the additional support for the bar in rear of the pivot-point thereof. This screw K is provided with an angular shoulder, *k*, whereby it may be readily turned to positively raise or lower the saddle

when the bolt *x* is loosened, a lock-nut, *l*, upon the screw serving as a means of securing the latter against accidental movement.

If only a slight vertical adjustment of the saddle is required from time to time, so that the supporting-arm H thereof remains in substantially a horizontal position, the saddle may be clipped directly to the arm in the usual way. To provide, however, for maintaining the saddle in a horizontal position, no matter what the angle of the supporting-arm may be, and to further provide for a ready and expeditious adjustment of the saddle to any desired degree of inclination, as well as to or from the head of the machine, to adapt the latter to the peculiarities of the rider under all ordinary conditions, I mount the saddle upon a bracket, J, provided on its under side with a depending ear, *j*, which is pivotally connected to the supporting arm H by a bolt, *m*, passing through an elongated slot, *n*, in said arm. It will thus be apparent that by loosening the bolt *m* the saddle may be easily and quickly adjusted to any desired angle with respect to its supporting-arm, and that it may with like facility be moved toward or from the head of the machine to any required extent within the limits of the elongated slot, whereupon it may be firmly locked immovably in place by again tightening the securing-bolt *m*.

The saddle is directly carried by a suitable spring-support. Thus a spring, S, hinged at its forward end to an ear on the upper side of the bracket J, carries the saddle, while the rear end of the spring passes loosely through a keeper, *s*, which permits the spring to yield freely under the weight of the rider.

The machine constructed as herein set forth is light, durable, and inexpensive, and combines ease and comfort to the rider, while the parts are so disposed as to be capable of ready, quick, and extended adjustment to adapt one machine to the use of riders of greatly-different sizes.

Without limiting myself to the exact construction and arrangement of parts shown and described, I claim—

1. The combination, in a velocipede, of a vertically-adjustable handle-bar, a saddle carried by a vertically-swinging support, and a pivotal connection between the saddle and its support, substantially as described.

2. The combination, in a velocipede, of a vertically-adjustable handle-bar, a saddle-support pivoted at its forward end, a saddle pivotally connected to said support at its opposite end, and means for adjusting the saddle lengthwise upon the support, substantially as described.

3. The combination, in a velocipede, of a vertically-adjustable handle-bar, a saddle-support pivoted at its forward end, a saddle pivotally connected to the free end of said support and adjustable lengthwise thereon, and means for locking the saddle-support in its adjusted position, substantially as described.

4. The combination, in a velocipede, of a saddle-support pivoted at its forward end to the backbone of the machine, a saddle carried thereby at its free end, and means for positively adjusting said support upon its pivot, substantially as described.

5. The combination, in a velocipede, of a saddle-support pivotally connected at one end to the backbone, a saddle carried by and adjustable on said support at its free end, the adjacent faces of said pivotal connection having interlocking notches or corrugations, and a bolt for clamping said faces together, substantially as described.

6. The combination, in a velocipede, of a saddle-bar pivotally connected at one end to the backbone, a saddle carried by said bar at its free end, and a vertically-adjustable supplemental support for said bar in rear of its pivot-point, substantially as described.

7. The combination, in a velocipede, of a saddle-bar pivotally connected at one end to the backbone, a saddle carried by said bar at its free end, and a screw having a bearing upon the backbone and supporting said bar in rear of its pivot-point, substantially as described.

8. The combination, in a velocipede, of a saddle bar pivotally connected at one end to the backbone, the adjacent faces of said connection having interlocking notches or corrugations, a bolt for clamping said faces together, a saddle pivoted to and adjustable longitudinally upon said bar at its free end, and an adjustable support for said bar in rear of its pivot point, substantially as described.

9. The combination, in a velocipede, of a front fork composed of substantially parallel side bars connected at their upper ends, and a yoke shaped bracket adjustable upon said fork and carrying the handle-bar, substantially as described.

10. The combination, in a velocipede, of a front fork composed of substantially parallel side bars connected at their upper ends, of a yoke-shaped bracket carrying the handle-bar and fitted to said side bars, and clamps for securing the bracket adjustably to the fork, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRIE B. HART.

Witnesses:

WILLIAM A. REDDING,

LEWIS HORACE HAYDEN.