

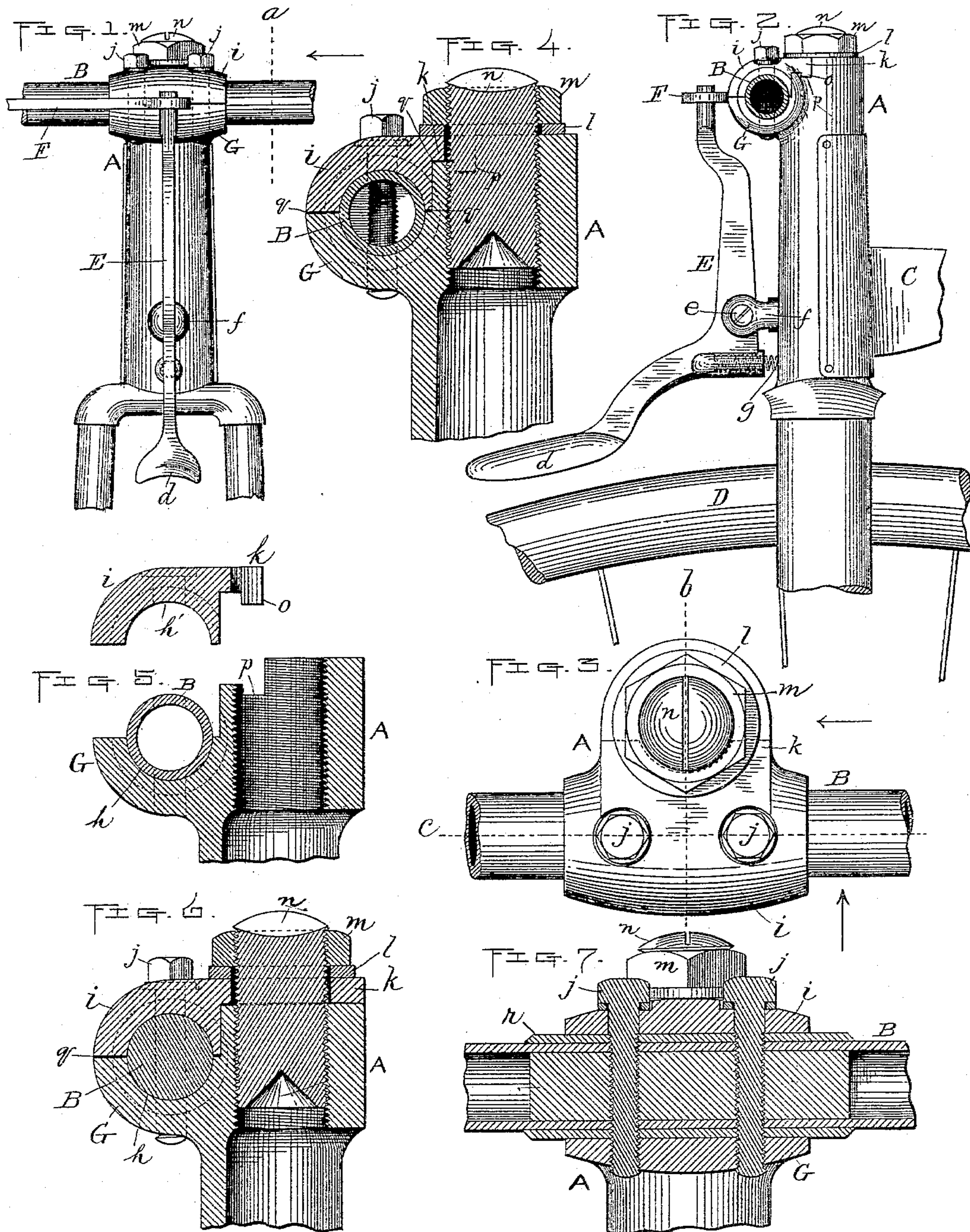
(No Model.)

I. JOHNSON & O. HANSON.

VELOCIPÈDE.

No. 388,047.

Patented Aug. 21, 1888.



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UNITED STATES PATENT OFFICE.

IVER JOHNSON AND OLAUS HANSON, OF WORCESTER, MASSACHUSETTS;
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VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 388,047, dated August 21, 1888.

Application filed October 31, 1887. Serial No. 253,818. (No model.)

To all whom it may concern:

Be it known that we, IVER JOHNSON and OLAUS HANSON, both of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Velocipedes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents so much of a bicycle as is necessary to illustrate our aforesaid improvements. Fig. 2 is a cross-section on line *a*, Fig. 1, through the handle-bar, showing beyond a side view of the parts illustrated in Fig. 1, also showing a part of the main or driving wheel. Fig. 3 represents, upon an enlarged scale, a top or plan view of the bicycle-head and a part of the handle-bar. All the figures following are also upon the same enlarged scale. Fig. 4 is a vertical transverse section through the head and handle-bar, taken on line *b*, Fig. 3, looking in the direction indicated by the arrow, same figure. Fig. 5 also represents a vertical transverse section with the center bolt and all fastenings removed, with the handle-bar in position, its cap detached, and said cap shown above the same in position preparatory to fitting it over the handle-bar and head; and Figs. 6 and 7 are vertical transverse and longitudinal sections taken at the points indicated by lines *b* and *c*, respectively, Fig. 3, showing modifications in the construction hereinafter described.

Our invention relates to the handle-bar attachment and brake mechanism of a velocipede, and is designed more especially for use on bicycles.

It consists in an improved means of adjustably fastening the handle-bar to the head and of imparting a yielding pressure to the brake below its pivot to keep it elevated above the wheel, as hereinafter more fully set forth.

In order that others may better understand our aforesaid improvements, we will now proceed to describe the same more in detail, with reference to the accompanying drawings.

The part marked A represents the velocipede-head; B, the central portion of the handle-bar; C, part of the backbone; D, part of

the main or driving wheel, and E the brake, having the usual foot, *d*, and hinged at *e* to the bearing *f*, extending forward from the head, also provided with the spring *g* below its pivot, and engaging at its upper end with the usual brake-lever, F, as hereinafter more fully described.

Our improvement in the handle-bar attachment consists of the following construction and arrangement of parts: A bearing, G, is formed upon the front side of the upper end of the head, which projects forward and laterally therefrom and is provided with a horizontal trough or groove, *h*, in the form of a half-circle, to receive the lower half of the handle-bar. It is also provided with a cap, *i*, having a reverse trough or groove, *h'*, so as to fit over the upper half of said handle-bar and hold it in position in its bearing. Said cap *i* is in turn held in a secure and rigid position after adjustment by means of the screw-bolts *j j*, passing through the cap, the handle-bar, and into the bearing, and by forming a flange, *k*, on the cap, extending back from its upper part, so as to come under the washer *l* and lock-nut *m* of the usual adjustable center bolt, *n*, said flange *k* being made upon its back edge to conform to the shape of the bolt, as indicated by dotted lines in Fig. 3. By thus constructing the cap it is obvious that by turning down the lock-nut, as is usual in locking the center bolt in position after adjustment, the cap, as well as said center bolt, is fastened under said nut, and, being also fastened by means of the usual bolts, *j j*, as above described, the handle-bar is held in a very secure and rigid manner from both rotary and longitudinal movements, while at the same time it may be detached in an easy and expeditious manner. Additional strength may be imparted to the fastening by forming projections *o o* upon the under side of the flange *k* and correspondingly-shaped openings or slots *p p* to receive them in the head A, and also by extending said flange *k* clear across the top of the head, with a vertical opening therein to receive the center bolt, as shown in Fig. 6. In making our improved fastening the horizontal joints *q* between the cap and the head and its bearing are preferably made a little open, as indicated by heavy lines in

the drawings, so as to obtain a tight fit of the circular groove in the cap against the handle-bar, also to admit of taking up the wear incident to usage, and thus maintaining said tight fit against the handle-bar.

The washer under the lock-nut *m* may be used or not, as desired, it being inessential to the carrying out of our invention.

The only feature which we claim, broadly, as new in the handle-bar attachment is extending the cap *i* under the lock-nut of the center bolt, so as to utilize the holding-power thereof, in connection with the usual fastenings.

We make no claim, broadly, to the combination of the head having a bearing for the handle-bar, said handle-bar, and the fastening-bolts *j*, the same being, as we are aware, already covered by several patents.

As the construction of the flange *k* and the fitting thereof between the lock-nut and head is susceptible of considerable variation, we reserve the right to modify the same as occasion requires. We also reserve the right to combine with our improvement a handle-bar made hollow, solid, having a sleeve, *r*, thereon, as shown in Fig. 7, or in any other suitable and convenient manner.

Our improvement in the brake mechanism consists simply in forming a horizontal opening or socket in the back side of the brake *E*, just below its pivot *e*, and fitting therein the spiral spring *g*, previously referred to. The outer end of said spring is arranged to bear against the side of the head *A*, and thus produces a constant yielding pressure against the lower part of said brake to keep its foot *d* in an elevated position above the wheel, as shown in Fig. 2. Said spring device, as will at once be seen, serves its purpose effectually, while at the same time being both simple and durable.

We are aware of the English Patent No. 562 of 1882, for improvement in velocipedes, in which a detachable cap is shown over the handle-bar, having a horizontal projection fitted over a vertical "stem" on the head, and fastened, in addition, to the lock-nut by screws passed through the front edges of the cap and bearing outside of the handle-bar. Therefore, in view of said patent, we make no claim to the flange *k*, broadly, but limit our invention to the specific construction set forth and shown in our specification and drawings.

We are also aware of the United States patent to S. Martin, No. 339,446, dated April 6, 1886, which shows a "stud, *r*²," on the under side of the handle-bar engaging with a "hole, *q*⁶, in the bracket," corresponding to bearing *G*, for the purpose of holding said handle-bar from rotary and longitudinal movement, and make no claim thereto. The fast-

ening-bolts *j*, hereinbefore described, not only serve the purpose of holding the handle-bar proper, but also assist in holding the cap *i* in position over said handle-bar, and thus greatly strengthen the fastening to an extent not attainable by the above patented construction.

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

1. In a velocipede, the head *A*, having the bearing *G*, made, substantially as described, to receive the handle-bar, said bearing in turn having suitable threaded openings to receive the fastening-bolts *j*, the usual center bolt, *n*, and the lock-nut *m*, preferably having a washer, *l*, under the same, in combination with the detachable cap *i*, also having suitable openings to receive the aforesaid fastening-bolts *j* and adapted to fit over the handle-bar and bearing *G*, also having a horizontal flange, *k*, extending back therefrom over the head, said flange being provided with a vertical slot or opening to receive the center bolt, the handle-bar having transverse openings through the same corresponding to those in the bearing and cap for the same purpose, and the fastening-bolts *j*, said bolts *j* serving the double purpose of holding the forward part of cap *i*, as well as the handle-bar, from rotary and longitudinal movement, substantially as set forth.

2. In a velocipede, the head *A*, having the bearing *G*, made, substantially as described, to receive the handle-bar, and the slots or openings *p*, to receive the projections *o* on the cap *i*, said bearing also having suitable openings to receive the fastening-bolts *j*, the center bolt, *n*, and lock-nut *m*, preferably having a washer, *l*, under the same, in combination with the detachable cap *i*, adapted to fit over the bearing *G* and handle-bar, and having a horizontal flange, *k*, extending back therefrom over the head, also having the projections *o* upon the under side thereof, and suitable openings to receive bolts *j*, said flange *k* also having a vertical slot or opening to receive the center bolt, the handle-bar having transverse openings through the same corresponding to those in the bearing and cap for the same purpose, and the fastening-bolts *j*, substantially as and for the purpose set forth.

3. The velocipede-brake *E*, having a horizontal opening or socket in the back side thereof below its pivot, in combination with the spring *g*, fitted therein, and the head *A*, substantially as and for the purpose set forth.

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