

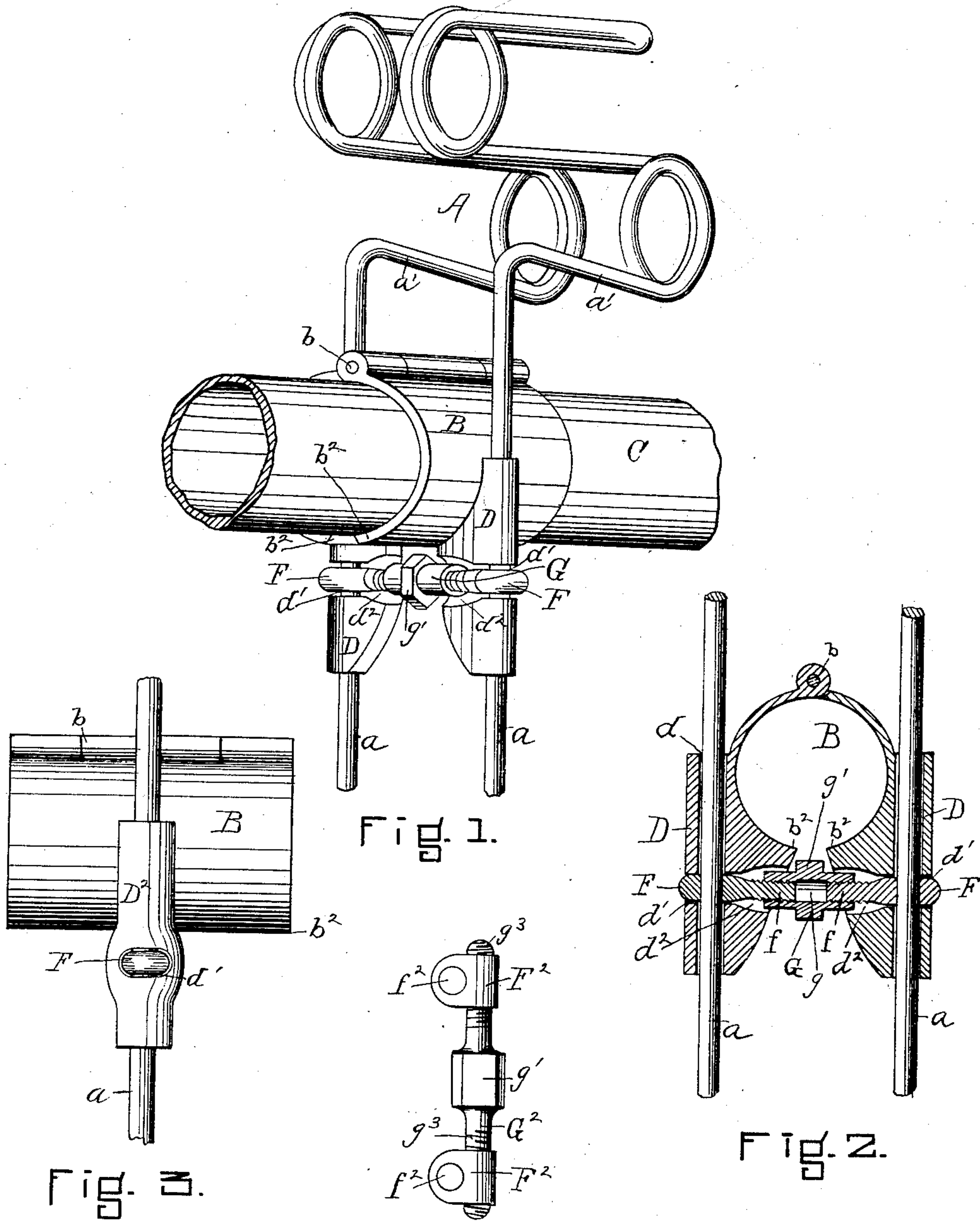
(No Model.)

H. J. HUDSON.

VELOCIPÈDE.

No. 375,707.

Patented Dec. 27, 1887.



WITNESSES.  
*Everett S. Benson,*  
*Geo. F. Kehew,*

INVENTOR.  
*Henry John Hudson,*  
*By Charles E. Pratt*  
*Att'y*



# UNITED STATES PATENT OFFICE.

HENRY JOHN HUDSON, OF BLACKFRIARS ROAD, COUNTY OF SURREY,  
ENGLAND, ASSIGNOR TO THE POPE MANUFACTURING COMPANY, OF  
PORTLAND, MAINE.

## VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 375,707, dated December 27, 1887.

Application filed September 19, 1887. Serial No. 250,063. (No model.) Patented in England September 18, 1884, No. 12,539.

*To all whom it may concern:*

Be it known that I, HENRY JOHN HUDSON, of Blackfriars Road, in the county of Surrey, England, a subject of the Queen of Great Britain, have invented certain new and useful Improvements in velocipede-seat clips and in mechanism for the adjustable attachment of the seats or saddles of velocipedes and the springs thereof to the perch, reach, or frame, (for which I have obtained a patent in Great Britain, numbered 12,539, bearing date September 18, 1884,) of which the following is a specification.

Prior to my improvements the usual method of rendering tricycle-seats adjustable vertically has been to mount the saddle or its spring on a vertical supporting-rod held by a clamp or set screw in a socket attached to the frame, and to secure fore-and-aft adjustment the seat or saddle has been mounted on a plate or clamp and this upon a bent or inverted L-pin supported in the frame.

Now the object of my invention is to provide the seat or saddle or the spring or springs supporting the same with mechanism by which either or both the fore-and-aft or vertical adjustment may be readily effected without weakening the frame or unnecessarily adding to it, and yet the seat be rigidly secured in any desired position, and by means that shall be applicable, also, to the perches or backbones of bicycles, safeties, or other velocipedes without tapping or weakening the frame, and in positions where the other method is impracticable.

I will now particularly describe my improvements as applied to a "cradle-spring" and horizontal reach of a tricycle, as shown in the accompanying drawings, in which—

Figure 1 shows my contrivance in perspective; and Fig. 2 shows parts of the same in vertical cross-section; and Figs. 3 and 4 show modifications, as will be explained.

A is a seat-spring of bent and coiled wire, its main part in the form of a cradle or Harrington spring; but instead of leaving the ends  $a' a'$  short and horizontal, as is usual, I extend and bend them downward to form the vertical supporting-rods  $a a$ .

B is a loop or band made to fit the cylindrical reach C, or the part of the frame of the ve-

locipede above and upon which the spring A is to be supported, and partially, but not completely, to surround it. This band I prefer to make in two parts, stoutly hinged at  $b$ , and with the two free sides  $b^2 b^2$  extending so as to nearly meet about the reach when in position.

D D are lugs formed on or attached to the sides of the loop B, bored at  $d d$  to form sockets to receive the rods  $a a$  vertically, or nearly so, and having mortises or openings  $d' d' d^2 d^2$  transversely to receive and permit the operation of the grips F F and sleeve-nut G.

The grips F F, I prefer to make in the form of eyebolts, as shown in Figs. 1 and 2, the rods  $a a$  passing through the eyes, and with stems  $f f$ , right and left hand threaded, or else differentially threaded for each co-operating pair.

G is a sleeve-nut having the internal bore,  $g$ , threaded to correspond with and fit upon the stems  $f f$ , and having also an annulus,  $g'$ , with facets for the application of a wrench.

When the parts are assembled, as shown, if the sleeve-nut be turned in one direction the parts are loosened and the spring may be adjusted vertically by raising or lowering the rods  $a a$  in their sockets, or the spring may be adjusted laterally or fore and aft by moving the loop B on the reach C, or both these adjustments may be made; and if the sleeve-nut be turned in the other direction the stems  $f f$  will be drawn together therein and the eyes of the grips drawn against the rods, and the latter against the lugs, and the loop against the reach till all the parts be tightened securely together in position, as desired.

Instead of making the openings  $d'$  in the lugs D, as shown in Fig. 1, I may make them, as shown in side elevation in Fig. 3, as closed mortises and insert the grips endwise.

Instead of a sleeve-nut and stem-grips, as shown in Figs. 1 and 2, I may make the screw-fastening devices, as shown in top plan in Fig. 4, to consist of a stem-nut,  $G^2$ , having right and left or differential screw-threaded stems  $g^3 g^3$ , and a facet annulus,  $g'$ , thereon, and make the grips  $F^2 F^2$  with the eyes  $f^2 f^2$  for the rods  $a a$  to have transverse bores or sockets correspondingly threaded for the stems  $g^3 g^3$ ; and in either form of tightening device I may make only one stem, as  $f$  or  $g^3$ , threaded



and its corresponding socket or sleeve end threaded, while the other is formed with a plain swivel-joint in any suitable form. It is also obvious that my improved clip and tightener 5 may be used with any other form of spring, and that the rods *a a*, instead of being formed on the spring, may be made separate and attached thereto by means of a plate, or otherwise; also, that instead of arranging the rods 10 on opposite sides of the clips, as shown, they may be both brought to the same side, or only one supporting-rod may be used instead of two, and that the two sides of the loop may be held to the reach by separate bolts or fastening devices, and that the tightening devices 15 *F G*, &c., may be arranged parallel with instead of transversely to the sides of the loop *B*, and that the same clips and tighteners may be used on bicycles or other velocipedes as 20 well as on tricycles, and applied to seats without springs, &c.; and I do not mean to limit myself to the exact details, shapes, arrangements, or forms of construction shown and described, as others may be observed without 25 departing from the substance of my invention.

I claim as new and of my invention—

1. A clip constructed with a loop for partially surrounding the part to which it is to be attached and with holding lugs and grips 30 for the parts to be supported thereby, and with means, substantially as set forth, operating between the lugs to draw the grips and the lugs together to secure the clip and the parts supported by it in position.

2. A clip with a loop constructed in two 35 parts hinged together for partially surrounding the part to which it is to be attached and with holding lugs and grips for the parts to be supported thereby, and with means, sub-

stantially as set forth, operating to draw the 40 grips and the lugs together to secure the clip and the parts supported by it in position.

3. A clip constructed with a loop for partially surrounding the part to which it is to be 45 attached and with a lug and mortise to receive a part to be supported thereby, and with a grip and sleeve or equivalent device for securing the supported part to the clip.

4. The combination, in a saddle clip, of a 50 loop, as *B*, one or more lugs, as *D*, one or more grips, as *F*, and a screw device, as *G f f*, constructed to operate essentially as set forth.

5. The combination of a loop, as *B*, one or 55 more lugs, as *D*, one or more grips, as *F*, and a screw device, as *G f f*, and one or more supporting-rods, as *a*, constructed to operate essentially as set forth.

6. A velocipede spring constructed with a 60 coiled wire branch, as *a'*, and a downward portion, as *a*, to operate as a vertically adjustable supporting-rod and for attachment to a clip.

7. The combination of a coiled and bent 65 wire seat-spring, as *A*, with a laterally-adjustable clip, as *B D*, and a tightening device, essentially as set forth.

8. The combination of a coiled and bent 70 wire seat-spring, as *A*, with a laterally-adjustable clip and a vertically-adjustable supporting part, as *a*, and tightening device, as *F G*, and connections, essentially as set forth.

HENRY JOHN HUDSON.

Witnesses:

W. WILLETT POPPLEWELL,  
17 and 18 Southampton Buildings, London, W. C.  
WALTER JAMES SKERTEN,  
17 Gracechurch Street, London, E. C.