(No Model.)

J. W. & G. D. UPSON.

SADDLE FOR BICYCLES OR VELOCIPEDES.

No. 588,039. Patented Aug. 10, 1897.

FIG. I

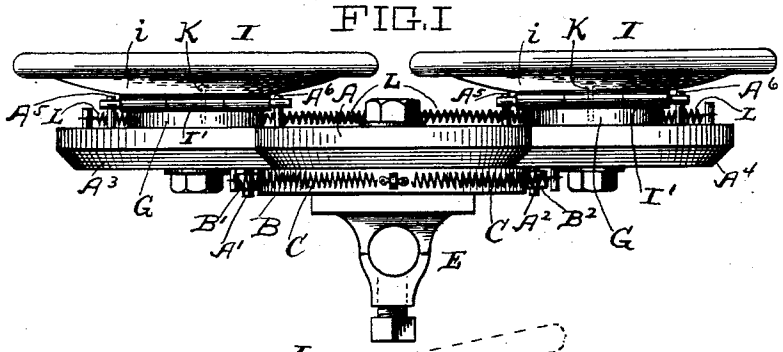


FIG. II

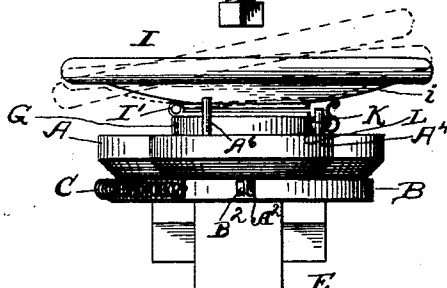
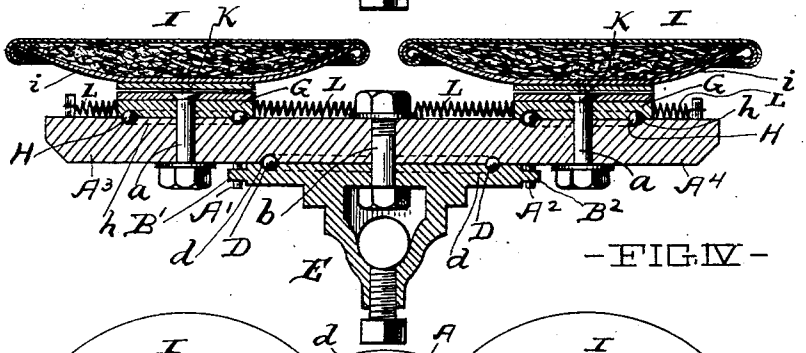
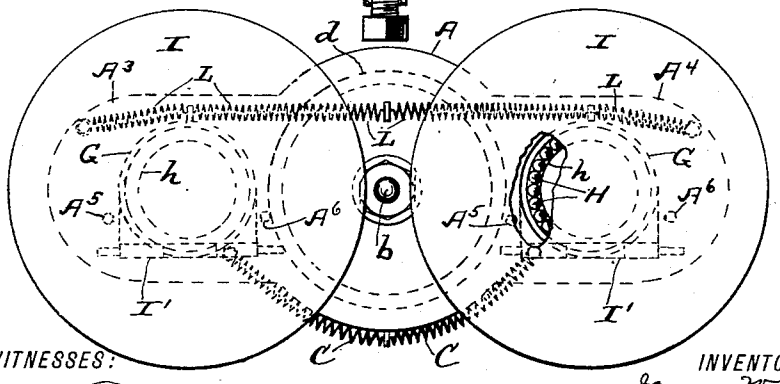


FIG. III

FIG. IV





WITNESSES:

J. C. Turner

L. Norris Hoover

INVENTORS

James W. Upson

and

George D. Upson

BY

Lynch, Dorer & Donnelly

their ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES W. UPSON AND GEORGE D. UPSON, OF CLEVELAND, OHIO; SAID JAMES W. UPSON ASSIGNOR TO SAID GEORGE D. UPSON AND SAID GEORGE D. UPSON ASSIGNOR OF ONE-HALF OF THE ENTIRE RIGHT TO WILBUR S. UPSON, OF MANSFIELD, OHIO.

SADDLE FOR BICYCLES OR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 588,039, dated August 10, 1897.

Application filed September 15, 1896. Serial No. 605,900. (No model.)

To all whom it may concern:

Be it known that we, JAMES W. UPSON and GEORGE D. UPSON, of Cleveland, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Saddles for Bicycles or Velocipedes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in saddles for bicycles or velocipedes.

The object of our invention is to provide a saddle that will automatically adjust itself to the varying positions and movements of the rider and at the same time afford two exceedingly safe, comfortable, and hygienic seats for the different haunches, respectively, of the rider.

With this object in view the invention consists, essentially, in a saddle that comprises two horizontally-arranged or approximately horizontally-arranged seats placed side by side and capable of tilting forwardly and oscillating independently of each other and capable also of being swung in a horizontal plane about a common axis; and the invention consists, furthermore, in certain novel and meritorious features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a front side elevation of a saddle embodying our invention. Fig. II is a right-hand side elevation relative to Fig. I, showing different positions of the seats in dotted lines. Fig. III is a front side elevation in central vertical section. Fig. IV is a top plan.

Our improved saddle for a bicycle or velocipede comprises a horizontally-arranged or approximately horizontally-arranged table A, that is seated upon a circular plate B and is mounted upon an upright cylindrical pin, stud, or bearing *b*, rigid with and projecting upwardly from the central portion of the aforesaid plate. Table A is therefore capable of oscillation in opposite directions. Table A on its under side and preferably rearward of its axis is provided with two downwardly-projecting members A' A^2, arranged a suitable distance apart at opposite sides, respectively, of the aforesaid axis and preferably next adjacent to the edge of plate B and in a position to engage different members B' and B^2, projecting outwardly from the edge of said plate B and arranged forward of the aforesaid depending members of the oscillating table. Member B' of plate B and member A' of table A form a stop for limiting the oscillation of said table in the one direction and member B^2 of plate B and member A^2 of table A constitute a stop for limiting the oscillation of said table in the opposite direction. Two spiral springs C C, that are attached at one end to plate B and extending from their attachment to the table in opposite directions, respectively, and connected at their opposite ends to the table, act to retain said table in its normal position, wherein its two depending members A' and A^2 are, as already indicated, separated from the outwardly-projecting members B' and B^2 of plate B.

A series of antifriction-balls D is preferably interposed between the opposing surfaces of plate B and table A, and said balls are preferably suitably arranged within an annular race *d*, formed in said opposing surfaces and arranged concentrically of the table's axis. Plate B upon its under side is provided with a clip E or other suitable device for securing it to the saddle-post of a bicycle or velocipede or to a spring or springs supported from said post or other member of the machine. Table A has two laterally and outwardly projecting arms A^3 and A^4 arranged in line and at opposite sides, respectively, of the table's axis. Each of the table-arms A^3 and A^4 has a turntable G seated thereon, and said table is preferably mounted upon a cylindrical pin or bearing *a* rigid with and projecting upwardly from the respective table-arm, and said table is therefore capable of oscillation in a horizontal plane. A series of antifriction-balls H is preferably interposed between the opposing surfaces of each table G and the table-arm supporting said table, and the balls are preferably suitably arranged within an annular race *h*, that is formed in said opposing surfaces and arranged concentrically of the table's axis. Each table G bears a seat I, that is preferably circular in plan and has its body portion *i* composed of a saucer-shaped plate cushioned in any approved manner.

Each seat I is hinged or pivoted horizontally, as at I', to the table supporting it forward of the table's axis, so that the seat's larger portion, and consequently the seat's greater weight and center of gravity, are rearward of the hinge or pivot, and hence gravity acts to retain the seat in its horizontal or normal position. The hinging or pivoting of each seat G to the table supporting it in the manner hereinbefore described accommodates the tilting of said table forwardly, but said forward tilting of the seat is limited by a stop that consists, preferably, of a cord or flexible strap or connection K, having its opposite ends attached to the seat and table, respectively, a suitable distance rearward of the aforesaid hinge or pivot. The pintle or pivotal pin of the hinge or pivotal connection between a seat I and its supporting-table G extends beyond the ends of its bearing, and the projecting ends of said pintle or pin and the two pins or members A^5 A^6, rigid with and projecting upwardly from the respective table-arm and arranged a short distance rearward of the opposite projecting ends, respectively, of said pintle or pin, form stops for limiting the oscillation of said table—that is, the respective table-arm's upwardly-projecting member A^5 and one end of said pintle or pin constitute a stop for limiting the oscillation of the table in the one direction and the arm's upwardly-projecting member A^6 and the opposite end of said pin or pintle form a stop for limiting the oscillation of said table in the opposite direction. Two spiral springs L L, attached at one end to each table I and extending from said table in opposite directions, respectively, and attached at their opposite ends to the arm supporting said table, act to retain the table in its normal position, wherein both ends of the pintle or pivotal pin of the hinge or pivotal connection between said table and the seat supported thereby are separated from the upwardly-projecting pins or members A^5 A^6 of the supporting table-arm.

From the foregoing description it will be observed that each of the seats of the saddle is capable of tilting forwardly and oscillating independently of the other seat; that both seats are capable of being swung simultaneously about a common upright axis; that by means of said motions and the arrangement and operation of parts hereinbefore described every motion of the rider is accommodated without friction or soreness arising therefrom; that if the rider sits erectly the two seats will remain horizontal or approximately so; that the rider if he leans forwardly will somewhat tilt the seats forwardly, as illustrated in the first dotted position of the seats in Fig. II; that each seat, when the rider is operating his machine, will tilt forwardly with the downward stroke of the rider's leg depending from his haunch upon said seat; that the two seats will therefore, when the rider is operating his machine, tilt forwardly alternately; that each seat's capability of oscillation will accommodate any lateral movement of the rider's haunch upon said seat; that the capability of both seats to swing simultaneously upon a common upright axis, together with the independent oscillating motions of each seat, will afford the rider more play, and consequently greater power and facility of operation; that my improved saddle affords a comfortable and hygienic seat for the rider, and affords greater opportunity for the proper development of the rider's members and muscles participating in the operation of the machine.

What we claim is—

1. A bicycle-saddle supported to oscillate on a central pivot in a horizontal plane and in a backward and forward direction.

2. In combination with a saddle having a horizontal bearing plate or surface upon its under side, a support having a horizontal bearing plate or surface on its upper side, and means for rotatably uniting the two bearing-plates together, whereby the saddle may be turned in a horizontal plane.

3. A saddle for a bicycle or velocipede, comprising a table capable of oscillation and arranged horizontally, or approximately so, and having two arms projecting laterally in opposite directions, respectively; a plate or bearing affording support for said table; means for limiting the oscillation of the table; means acting to retain the table in its normal position, and two seats supported from the different arms, respectively, substantially as set forth.

4. A saddle for a bicycle or velocipede, comprising a table capable of oscillation and arranged horizontally, or approximately so, and two seats arranged side by side and supported from said table, and said seats being capable of tilting forwardly independently of each other and having the centers of the tilting motions arranged forward of the seats' centers of gravity, substantially as set forth.

5. A saddle for a bicycle or velocipede, comprising a table capable of oscillation and arranged horizontally, or approximately so, and having two arms projecting laterally in opposite directions, respectively; a plate or bearing affording support for said table; means for limiting the oscillation of the table; means acting to retain the table in its normal position; two seats supported from the different arms, respectively, and capable of tilting forwardly independently of each other and having the centers of the tilting motions forward of the seats' centers of gravity, substantially as set forth.

6. A saddle for a bicycle or velocipede, comprising a table capable of oscillation and arranged horizontally, or approximately so, and two seats supported from said table and arranged side by side, and horizontally hinged or pivoted to their support, and means for limiting the forward tilting of the seats, substantially as set forth.

7. A saddle for a bicycle or velocipede, com-

prising two seats arranged side by side and capable of tilting forwardly, and capable, also, of oscillation in a horizontal plane or in their inclined position, and means acting to retain them in their normal position, substantially as and for the purpose set forth.

8. A saddle for a bicycle or velocipede, comprising two suitably-supported tables arranged side by side and capable of oscillation, and two forwardly-tiltable seats supported from the different tables, respectively, and movable independently of each other, substantially as and for the purpose set forth.

9. A saddle for a bicycle or velocipede, comprising two suitably-supported tables arranged side by side, and capable of oscillation; means acting to retain said tables in their normal position; means for limiting the oscillation of the tables, and two seats horizontally hinged or pivoted to the different tables, respectively, forward of the seats' centers of gravity, substantially as and for the purpose set forth.

10. A saddle for a bicycle or velocipede comprising an oscillating table A; a pair of oscillating tables G G arranged side by side and supported from the first-mentioned table, and the two forwardly and independently tiltable seats supported from the different tables G G, respectively, substantially as and for the purpose set forth.

11. A saddle for a bicycle or velocipede, comprising two suitably-supported tables arranged side by side, and capable of oscillation; means acting to retain said tables in their normal position; means for limiting the oscillation of the tables, and the two seat-forming cushioned saucer-shaped plates horizontally hinged or pivoted to the different tables, respectively, substantially as set forth.

12. A saddle for a bicycle or velocipede, comprising an oscillating table A; a pair of oscillating tables G G arranged side by side and supported from the first-mentioned table, and the two forwardly and independently-tiltable seat-forming cushioned saucer-shaped plates supported from the different tables G G, respectively, substantially as and for the purpose set forth.

13. A seat for a bicycle or velocipede, comprising a plate B arranged horizontally, or approximately so, and provided, upon its under side, with a clip or device for attaching it to a member of the machine; a table supported from said plate, and capable of oscillation, and having two arms extending laterally in opposite directions, respectively; means for retaining said table in its normal position; means for limiting the oscillation of said table; two other tables supported from the different table-arms, respectively, and capable of oscillation independently of each other; means acting to retain said last-mentioned tables in their normal position; means for limiting the oscillation of said last-mentioned tables, and the two seats supported from the different last-mentioned tables, respectively, and capable of tilting forwardly independently of each other, substantially as and for the purpose set forth.

14. A saddle for a bicycle or velocipede, comprising a circular plate B arranged horizontally, or approximately so, and provided, upon its edge, with the two outwardly-projecting members B' B^2, the table A capable of oscillation and mounted upon said plate and provided with the arms A^3 A^4 extending laterally in opposite directions, respectively, and the depending members A' A^2, and the two seats supported from the different table-arms, respectively, and capable of tilting forwardly independently of each other, all arranged and operating substantially as shown, for the purpose specified.

15. A saddle for a bicycle or velocipede, having two suitably-supported tables at its opposite sides, respectively, and said tables being capable of oscillation independently of each other; means acting to retain said tables in their normal position; the two seats horizontally hinged or pivoted to the different tables, respectively, and the pintles or pins of the hinged or pivotal connection between the seats and tables extending beyond their bearings, and the members, that support the tables, having upwardly-projecting pins or members arranged to form, in connection with the ends of the aforesaid pintles or pins, stops for limiting the oscillation of the tables, substantially as set forth.

In testimony whereof we sign this specification, in the presence of two witnesses, this 3d day of September, 1896.

JAMES W. UPSON.
GEORGE D. UPSON.

Witnesses:
C. H. DORER,
ELLA E. TILDEN.