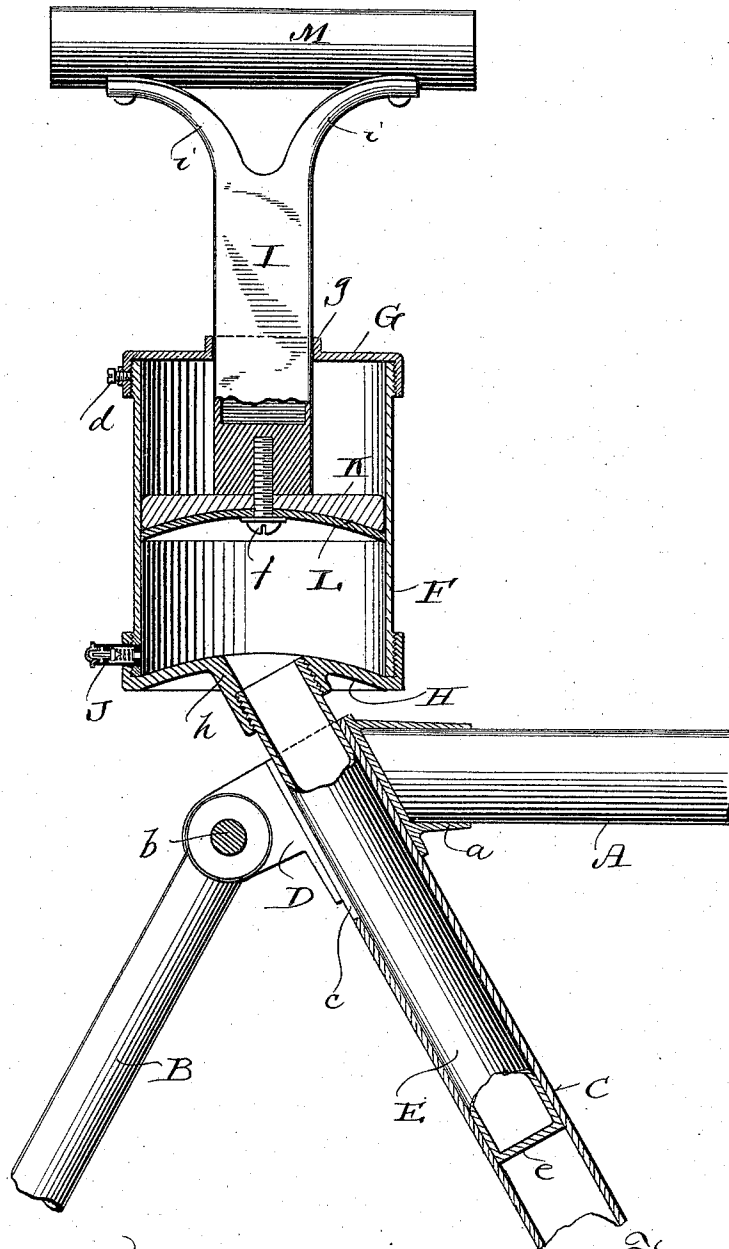


(No Model.)

E. F. SPAULDING.
PNEUMATIC SPRING SEAT.

No. 576,328.

Patented Feb. 2, 1897.



Witnesses:
Geo W. Louny
Henry Rantert

Inventor:
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Attorney

UNITED STATES PATENT OFFICE.

EUGENE F. SPAULDING, OF ROSE LAWN, WISCONSIN.

PNEUMATIC SPRING-SEAT.

SPECIFICATION forming part of Letters Patent No. 576,328, dated February 2, 1897.

Application filed July 13, 1895. Serial No. 555,894. (No model.)

To all whom it may concern:

Be it known that I, EUGENE F. SPAULDING, a citizen of the United States, and a resident of Rose Lawn, in the county of Shawano and State of Wisconsin, have invented certain new and useful Improvements in Pneumatic Spring-Seats; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has especial reference to seats for bicycles and analogous vehicles, although not limited thereto; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter and subsequently claimed.

The drawing is a view, partly in side elevation and partly in section, representing my invention applied to a bicycle-seat.

Referring to the drawing, A B C represent portions of the tubular frame of a bicycle of ordinary construction, A being the upper reach, B one of the rear braces, and C the upright that receives the saddle-post in the ordinary construction, D being the clamp for securing said post in its desired adjustment. As arranged by me these parts are the same, the only difference being that I employ a hollow post E, closed at the bottom, as shown at e, to form an air-cylinder for the purpose hereinafter explained. A socket a on the clamp D receives the upper reach A, and the upright C is formed with the usual slot c at the upper end, b being the set-screw of the clamp D.

F is a cylinder having a screw-threaded top G and screw-threaded bottom H, secured thereto by means of exterior screw-threads on said cylinder. The bottom H has a central opening guarded by an angularly-disposed downward-projecting thimble h, having interior screw-threads to receive the externally-screw-threaded upper end of the hollow post E, just described. The top G is likewise formed with a central opening, protected by an upward-extending vertical flange g, but this opening and flange are rectangular in form to receive and guide the seat-post I of corresponding contour. The top G is held to place after being screwed on by set-screw d.

J is a valve by means of which the cylinder F is filled with compressed air, and the valve is externally screw-threaded and passes through screw-threaded openings in the flange of the bottom H and lower part of the cylinder F, so that when the parts are put together

as shown in the drawing the said valve performs the same office in preventing said bottom from unscrewing as does the described set-screw d above with relation to the top G.

K is a metal block flat on its upper side and concave on its under surface, and L is a washer, of leather, rubber, or analogous material, placed against the said concave surface of the said block K, together forming a piston-head, secured, as by screw f, to the lower end of the seat-post I, which latter thus becomes a piston-rod. M is a round rod secured to the upper end of the post I to receive a saddle of any approved construction, it being desirable that said saddle should be secured in line with the center of the seat-post I, between the upper branching arms i i thereof, so that the pressure of the rider will bear squarely down upon the piston-head.

The operation of my device will be readily understood from the foregoing description of its construction, taken in connection with the accompanying drawing.

Compressed air is pumped into the cylinder F through the valve J until said cylinder, as well as the hollow tube E, become filled, and thereby a pneumatic spring is provided for the seat, the post of the latter serving as the piston-rod, as already stated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a pneumatic spring-seat, the combination with a cylinder for compressed air having a screw-threaded flanged detachable base, of a vertically-movable piston within said cylinder, and an air-inlet valve having exterior screw-threads meshing with interior screw-threads in registering transverse openings through said base-flange and the adjacent lower part of the side wall of the cylinder, whereby said valve performs the double function of admitting air to the cylinder, and preventing the premature or accidental separation of the cylinder and its base, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Rose Lawn, in the county of Shawano and State of Wisconsin, in the presence of two witnesses.

EUGENE F. SPAULDING.

Witnesses:

EMILY T. DITTMER,
ROSE C. UECKE.