No. 607,181. Patented July 12, 1898.

G. W. LORD.

SEAT POST FOR BICYCLES.

(Application filed Jan. 11, 1897.)

(No Model.)

Fig. 3.

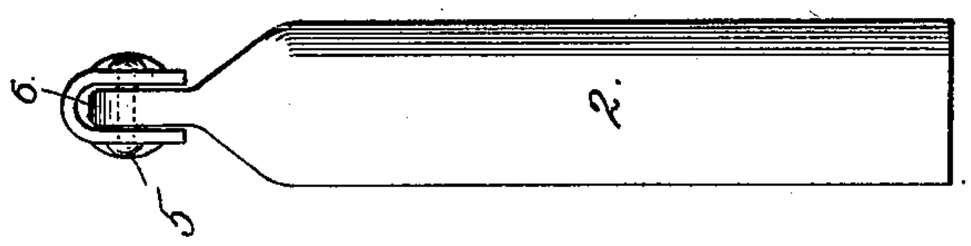


Fig. 2.

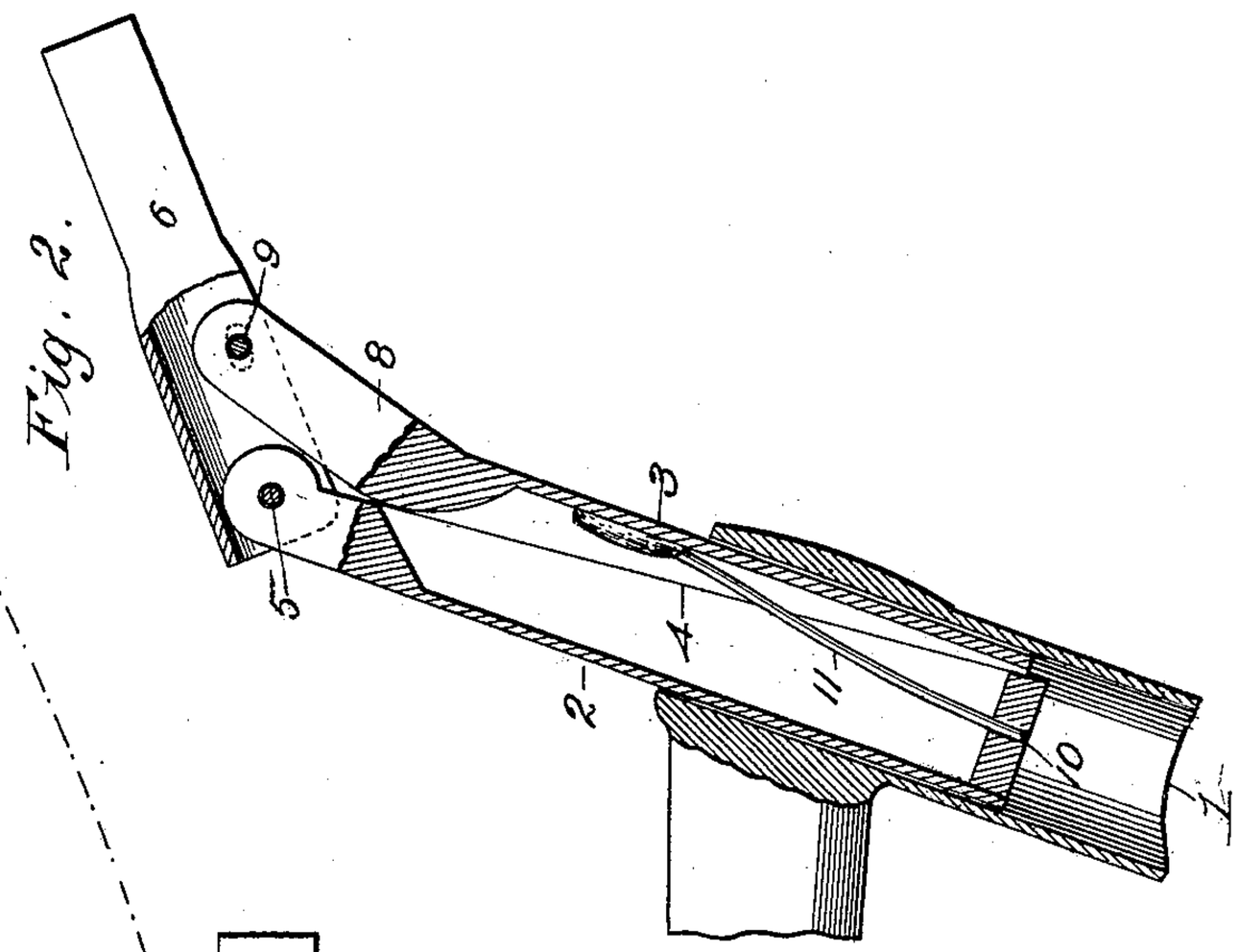
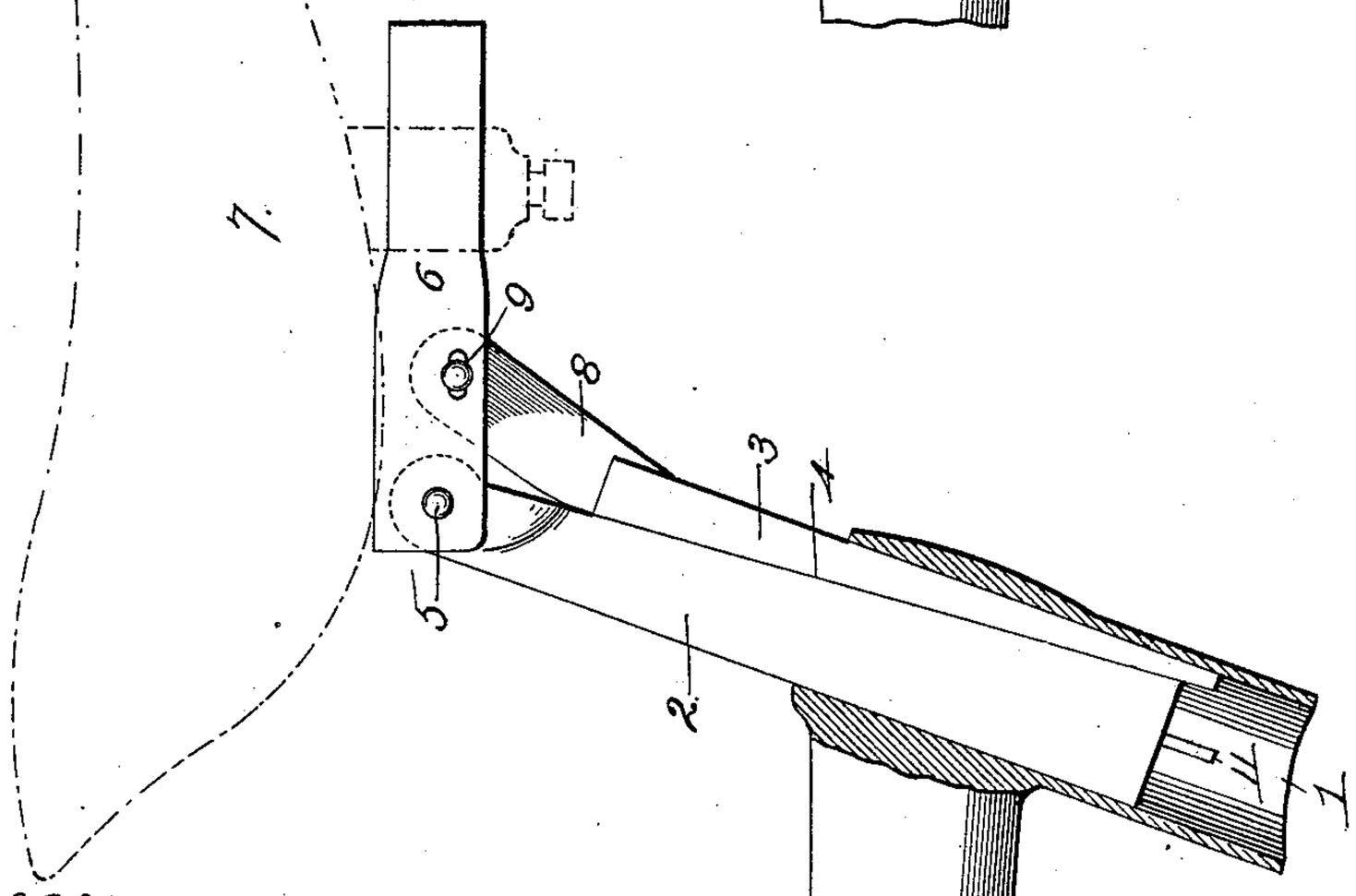


Fig. 1.



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UNITED STATES PATENT OFFICE.

GEORGE W. LORD, OF EXCELSIOR SPRINGS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE WATSON AUTOMATIC SEAT POST COMPANY, OF PATERSON, NEW JERSEY.

SEAT-POST FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 607,181, dated July 12, 1898.

Application filed January 11, 1897. Serial No. 618,875. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LORD, of Excelsior Springs, Clay county, Missouri, have invented certain new and useful Improvements in Seat-Posts for Bicycles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in bicycles, and more particularly to an improved seat-post.

The object of the invention is to produce a seat-post which is simple, strong, durable, and inexpensive of construction and which may be easily and quickly adjusted to raise or lower the seat.

A further object of the invention is to produce a seat-post which will more reliably support the rider as the weight or strain upon the seat increases.

To these ends the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a seat-post embodying my invention secured operatively in position in the seat-post-supporting standard (shown in section) of a bicycle-frame. Fig. 2 represents a vertical section of the same in the position it occupies before the seat assumes the required position—that is, before the post is reliably secured at the desired point. Fig. 3 represents a front view of said post detached from the frame.

Referring to the drawings in detail, 1 designates the usual hollow standard of a bicycle-frame, in which the seat-post is mounted.

The seat-post proper comprises two members 2 and 3 and is formed, preferably, of hollow tubing cut obliquely in half from end to end, as shown at 4. By this construction it is obvious that the member 3 forms practically a wedge. The member 2, which is what I by preference term the "body" of the post, is flattened and reduced at its upper end, and pivotally connected thereto, as at 5, is the seat-supporting bar 6, which forms, in effect, a lever, as will hereinafter appear. Mounted adjustably upon the rear end of the lever is a seat 7 of any preferred form or type. Said bar or lever is preferably bifurcated at its front end and embraces the opposite side of the upper end of the body 2 of the post and also embraces the upper end of the arm 8, formed at the upper end of the wedge member 3, said arm being pivotally connected to the bar or lever 6, as at 9. Owing to the fact that the distance between the pivots 5 and 9 varies as the lever is raised or lowered the latter must be provided with a longitudinal slot in which the pivot 9 may play. Thus it will be seen that the movement of the bar or member 6 in a vertical plane will cause the wedge member 3 to slide up and down upon its companion member 2, and consequently increase or diminish the diameter of the seat-post.

In order that my seat-post may be rendered more practical and convenient, it is desirable that the two members of the post be held toward each other with a yielding pressure all the time. This arrangement obviously would prevent the members of the post from separating or swinging apart whenever the post was drawn out of the standard 1, which separation, if it occurred, would necessitate the operator, each time he fitted the seat in position, pressing and holding said members together until he had succeeded in fitting the lower end of the members into said standard. This manipulation, if necessary, would be very objectionable, and to obviate it I have provided the member 2 with a closed lower end having an aperture 10, and the member 3 with a spring rod or arm 11, which is secured in any suitable manner at its upper end to the said member 3 and at its lower end projects through the aperture 10, and consequently tends to hold said members together with a yielding pressure. The arrangement is such, however, that when the rider alights upon the seat the member 3 is caused to slide down upon the member 2, the spring sliding down through the aperture 10 and yielding

or springing laterally, of course, to accommodate this relative change of position of the members 2 and 3.

When securing the seat-post in position, the bar or lever carrying the seat is tilted to the position shown in Fig. 2, so as to raise the wedge member and reduce the diameter of the post. The latter is then fitted down into the tubular standard of the frame in the customary manner until the seat is at the required height. The member 2 of the post is then grasped and held firmly until pressure is brought to bear upon the seat and its rear end depressed until the wedge member has been moved down to the position shown in full lines, Fig. 1, and the diameter of the seat-post increased to such an extent that it is tightly embraced by the surrounding standard and the seat has assumed a horizontal position. The rider may now mount in perfect safety, as his weight upon the saddle will only tend to support it more reliably in its proper position, as will be readily understood.

Thus it will be seen that by constructing one member of a seat-post with a surface which converges relatively to the opposing surface of the seat-post standard and the other member in the form of a wedge and connecting the two by a seat-supporting lever, which is actuated by the weight of the rider to move downwardly into the converging space formed by and between the first-named member and the opposing wall of the seat-post standard, weight applied upon said standard will only tend to more reliably support the post in position, and that when no one is upon the seat it can without the use of a wrench or any other implement be quickly and easily removed from position or adjusted to a higher or lower plane to accommodate riders of varying lengths of limb.

It will furthermore be obvious that the rider of a wheel provided with my improvement may leave it standing outside his door or any building with almost perfect confidence that it will be there when he returns, because he can take the seat with him, and very few people care to attempt to spirit away a seatless vehicle.

Thus it will be seen that I have produced an adjustable seat-post which embodies the advantages enumerated in the statement of invention, and it is to be understood that slight changes in its detail construction or arrangement will not be considered a departure from the spirit and scope of the invention.

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

1. A seat-post for bicycles, comprising an upwardly-tapering member, a downwardly-tapering member, and a seat-supporting lever fulcrumed upon the first-named member and pivotally connected to the last-named or sliding member, substantially as described.

2. The combination with the tubular seat-post-supporting standard of a bicycle-frame, of a cylindrical seat-post fitting snugly within said standard and formed by cutting a piece of tubing in half longitudinally, so as to produce opposing inclined faces on the members thus formed, a lever fulcrumed at its front end upon the member forming the body of the post and adapted to swing in a vertical plane, and pivotally connected to the upper end of the other member nearer its rear end, and a seat mounted upon said lever rearward of its connection with the last-named member, substantially as described.

3. A seat-post for bicycles, comprising a pair of members having cam or inclined faces fitting slidingly together, and a spring holding them yieldingly in this position.

4. A seat-post for bicycles, comprising a pair of members having opposing inclined faces fitted together, and one of them provided with an apertured bottom, and a spring extending through said aperture and secured at its upper end to the member not provided with the apertured bottom.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. LORD.

Witnesses:
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