

No. 711,205.

Patented Oct. 14, 1902.

P. N. GOODRICH.

ADJUSTABLE BICYCLE SADDLE POST.

(Application filed Feb. 5, 1901.)

(No Model.)

Fig. 1.

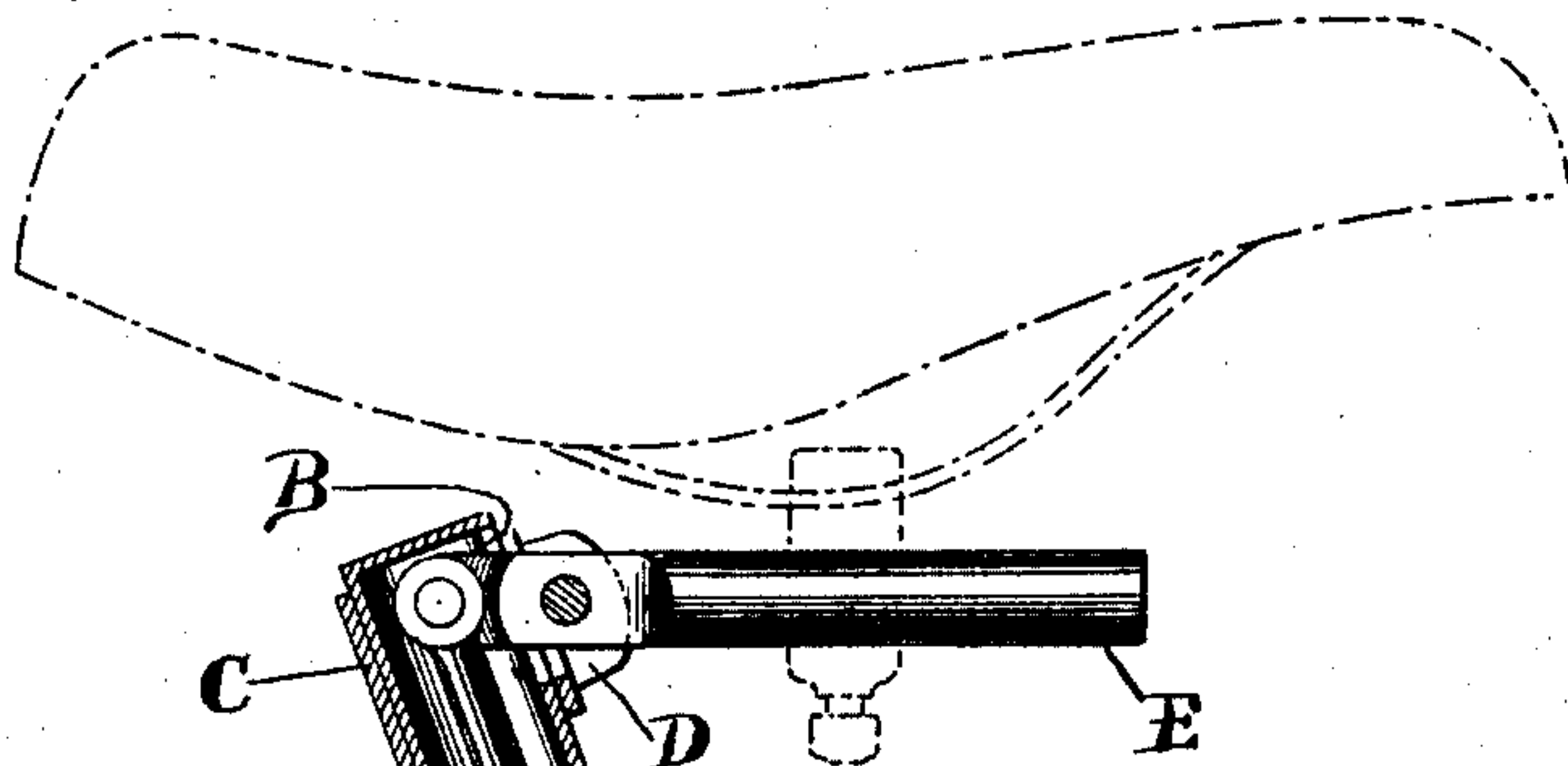


Fig. 3.

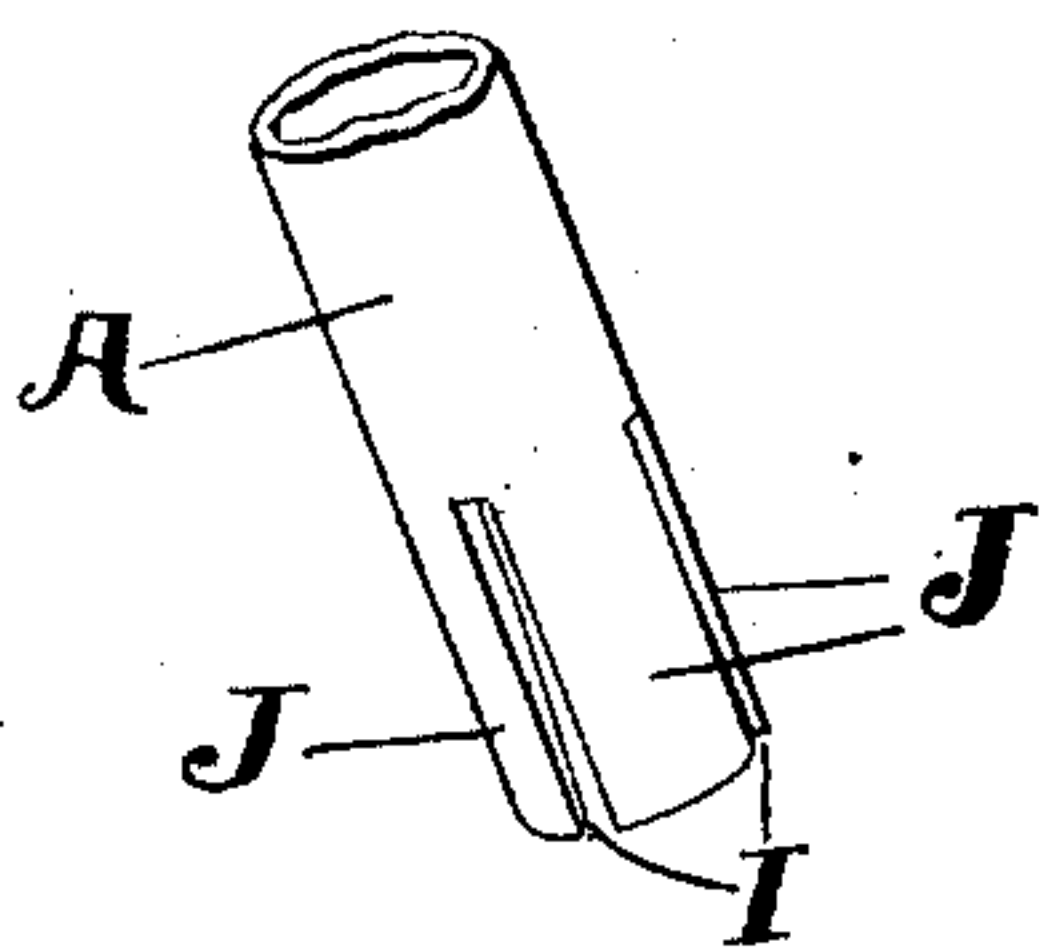
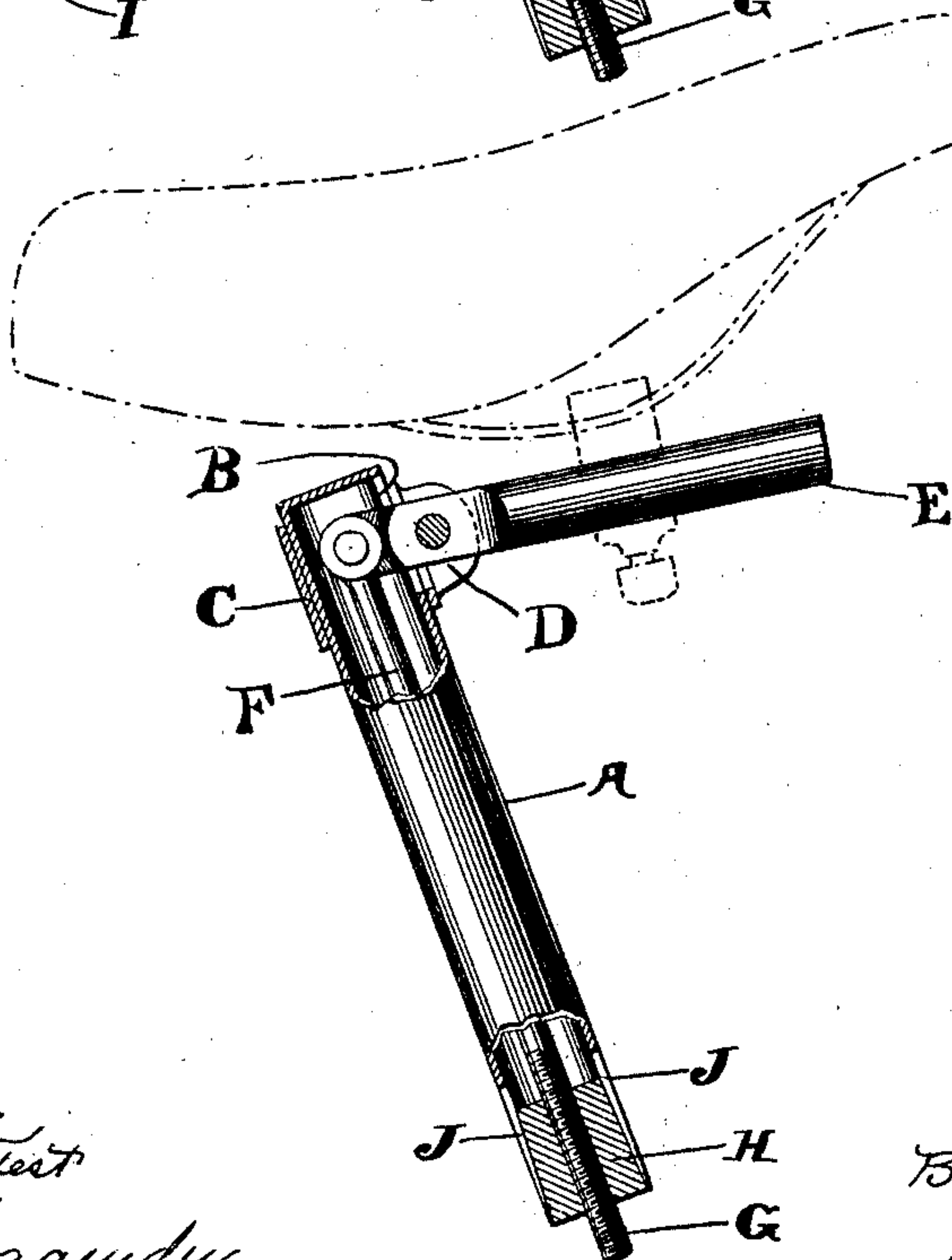


Fig. 2.



Witnesses
Harry M. Test
A. M. Maguire.

Inventor
P. N. Goodrich.
By *[Signature]*
Attorneys

UNITED STATES PATENT OFFICE.

PAUL N. GOODRICH, OF BOSTON, MASSACHUSETTS.

ADJUSTABLE BICYCLE SADDLE-POST.

SPECIFICATION forming part of Letters Patent No. 711,205, dated October 14, 1902.

Application filed February 5, 1901. Serial No. 46,084. (No model.)

To all whom it may concern:

Be it known that I, PAUL N. GOODRICH, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Adjustable Bicycle Saddle-Post, of which the following is a specification.

This invention relates to improvements in adjustable bicycle saddle-posts; and the object is to provide a simple and improved construction of saddle-post having means whereby the saddle may be conveniently adjusted to position it at any desired angle with relation to the post.

Another object is to provide a post having simple and convenient means for effecting the vertical adjustment of the saddle.

A further object is to provide a post having effective means for securely and positively locking the saddle in both of the above-mentioned adjustments.

A still further object is to so construct said adjusting and locking means that the saddle may be readily and conveniently adjusted and locked in its adjustment without the use of a wrench or other tool.

With the above objects in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claim, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, showing the saddle in one of its adjustments, said saddle being indicated by dotted lines; Fig. 2, a similar view showing the saddle adjusted at a different angle to the post, and Fig. 3 a detail view showing the expandible end of the stem.

Referring now more particularly to the accompanying drawings, A designates the stem of the post, formed of tubing and having its upper end closed and slotted longitudinally adjacent to said closed end, as indicated at B. Secured about said stem at its upper end is a band or collar C, formed with a slot, which when the collar is in position upon the stem coincides with the slot B, formed in the latter, and formed on each side of its slot with lugs or ears D. Pivotaly mounted intermediately of its ends between said ears is a seat-bar E, having its inner end projecting through the slots

of the band and stem, to the interior of the latter. The pivotal point of the seat-bar is not at its center, but is near the inner end thereof, as clearly illustrated.

The saddle is adjustably secured upon bar E in the usual manner, the same forming no part of my invention.

Pivoted at its upper end to the inner end of bar E is a rod F, which has its lower end screw-threaded, as indicated at G. Adjustable upon this screw-threaded end of the rod is a tapered plug H, having a centrally-screw-threaded bore to receive the rod. This tapered plug constitutes an expanding member for expanding the lower end of the stem to cause the same to bind in the hollow standard of the bicycle-frame, as will be more fully set forth. The lower end of said stem, which receives the expanding member, is formed with slots I, which produce expansible portions J, which are tapered upon their inner sides, the taper thereof extending reversely to the taper of the plug.

The operation of my invention is as follows: The stem of the post is securely held in the upright of the bicycle-frame by the action of the expanding member. The upward movement of this member effects the expanding of the lower end of the stem, causing the same to tightly bind in the standard of the machine-frame, and the weight of the rider upon the saddle tends to draw said plug upwardly, so that the stem is securely held in its vertical adjustment. Thus the saddle may be readily adjusted vertically by simply swinging the outer end of the bar E upwardly, which forces the plug downwardly and releases the stem. The stem may be then moved up or down to effect the desired adjustment of the saddle, after which it may be locked in its adjustment by pressing down on the nose of the saddle, which draws the plug upwardly in the stem, expanding the lower end thereof and binding it in the frame, as before set forth. To adjust the saddle with respect to the stem, the stem is released from the standard of the frame, as before set forth, and removed therefrom. The plug is then adjusted upon the screw-threaded rod and the stem replaced in the frame and locked therein by the downward movement of the nose of the saddle. The angle of the saddle is thus

varied with relation to the stem by moving the plug up or down upon the screw-threaded rod, which rod may be termed a "locking-rod," the lower end of the tube being expanded when the plug is adjusted upwardly upon the screw-threaded rod before the saddle-bar E has reached a horizontal position. Thus by adjusting the plug upon the screw-threaded rod the stem may be expanded to bind in the frame of the bicycle with the saddle at any desired angle.

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

15 In an adjustable seat-post for bicycles, the combination with a tubular stem having a longitudinally-split lower end, the interior wall thereof, at the lower end, being beveled or tapered, making the bore widest at the 20 bottom, a longitudinal slot in the top end

thereof, and ears or lugs disposed on each side of said transverse slot; of a cross-bar, to which the seat is attached, pivoted intermediate its ends, in said ears or lugs, one end of said bar entering through the slot into the interior of the stem, a rod contained in said hollow stem, connected to the inner end of the said cross-bar, and having a threaded end and an inverted conical plug arranged in the lower tapered end of said stem, having a central threaded bore therethrough, and into which the threaded end of said rod screws, whereby upward movement of said plug through the rod and pivoted cross-bars spreads the split end of said stem and locks the same, 35 substantially as described.

PAUL N. GOODRICH.

Witnesses:

FRANK W. LANE,
JESSIE M. DUQUETTE.