

No. 607,148.

Patented July 12, 1898.

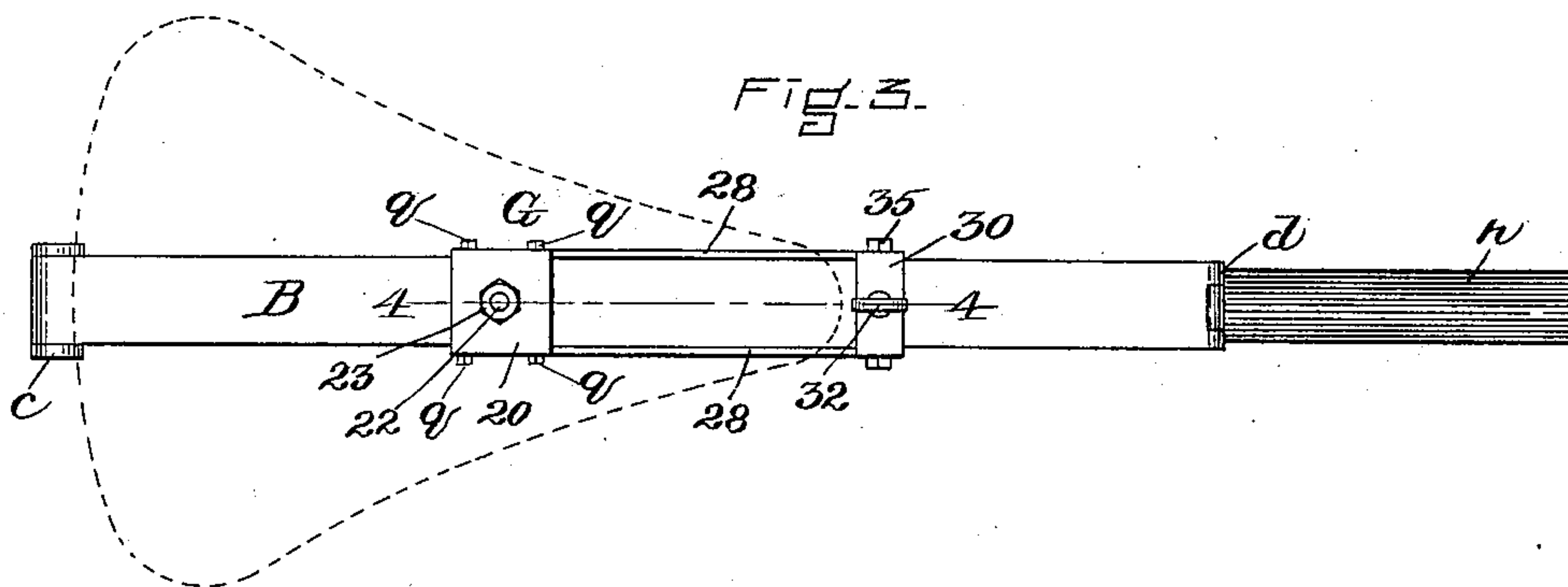
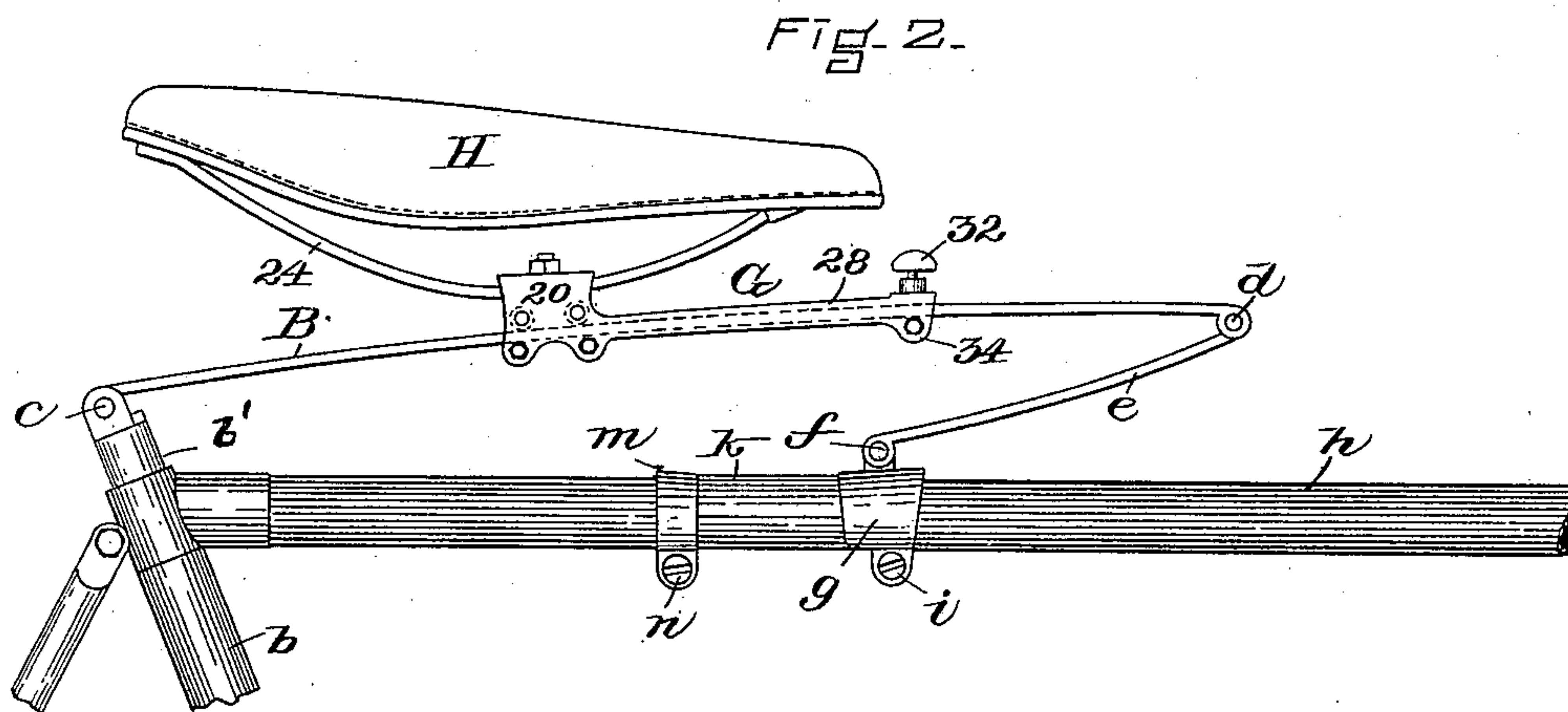
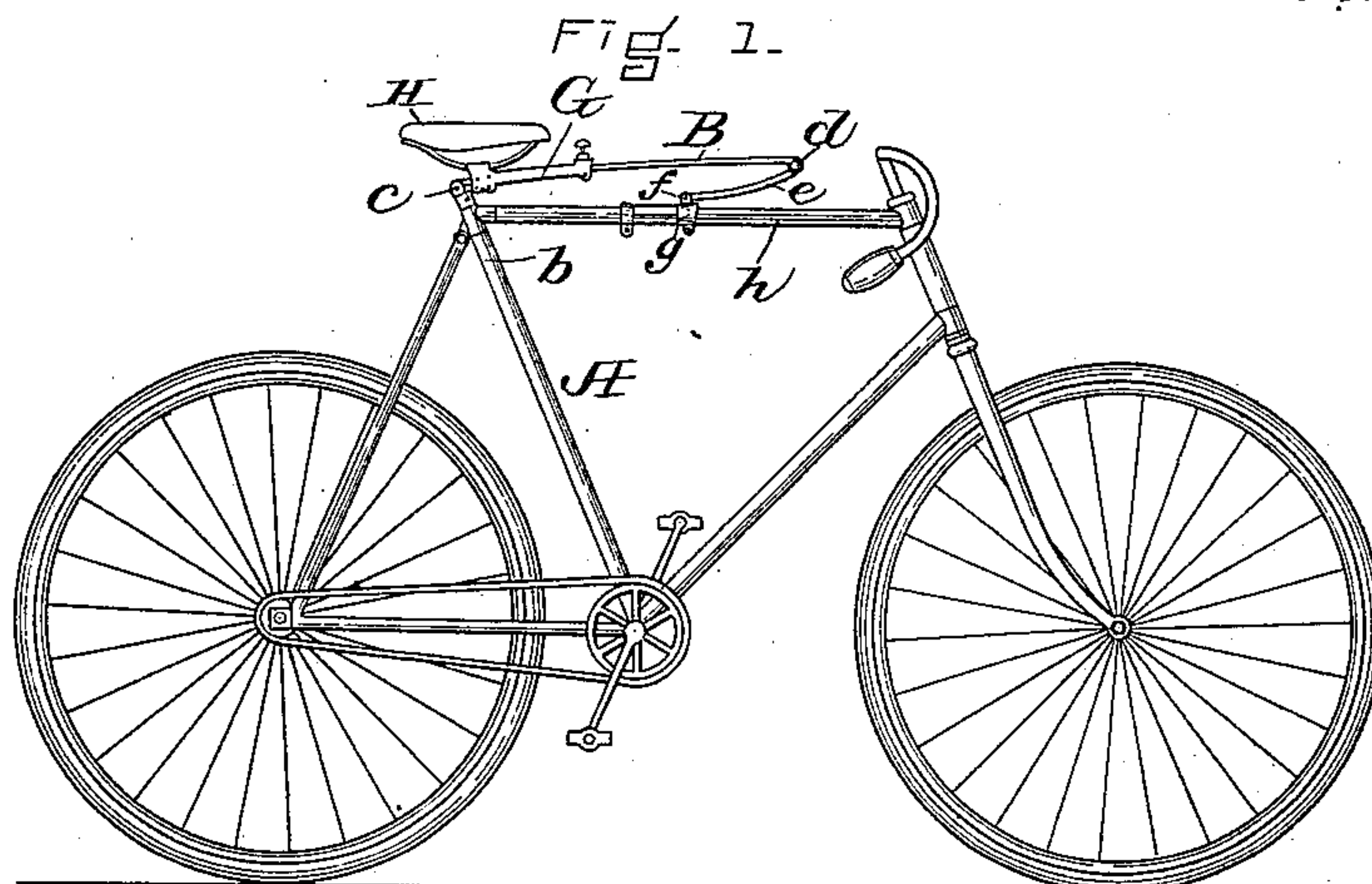
C. F. WEBBER.

BICYCLE SADDLE ADJUSTING DEVICE AND SPRING.

(Application filed July 24, 1897.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

A. D. Provet.

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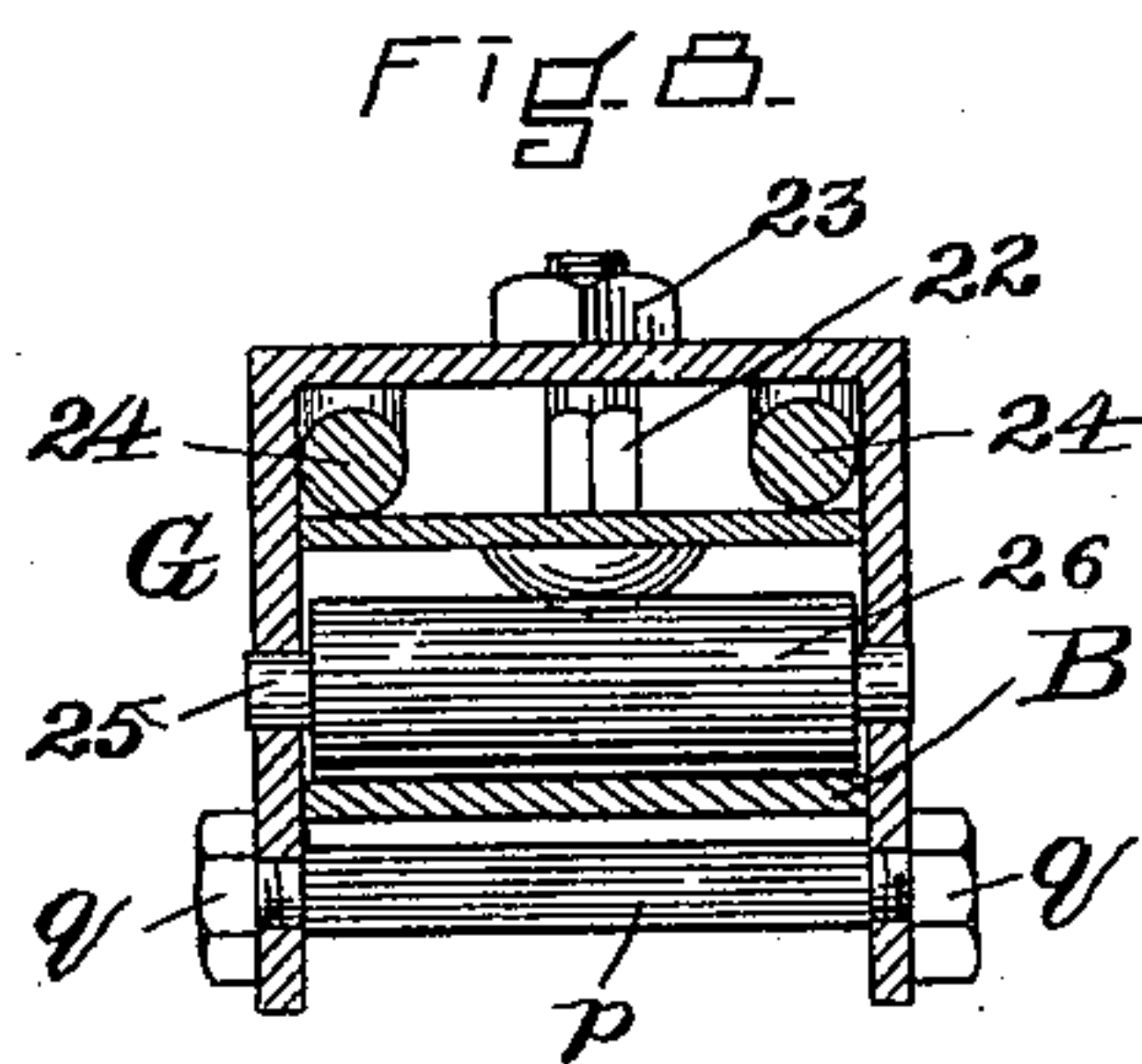
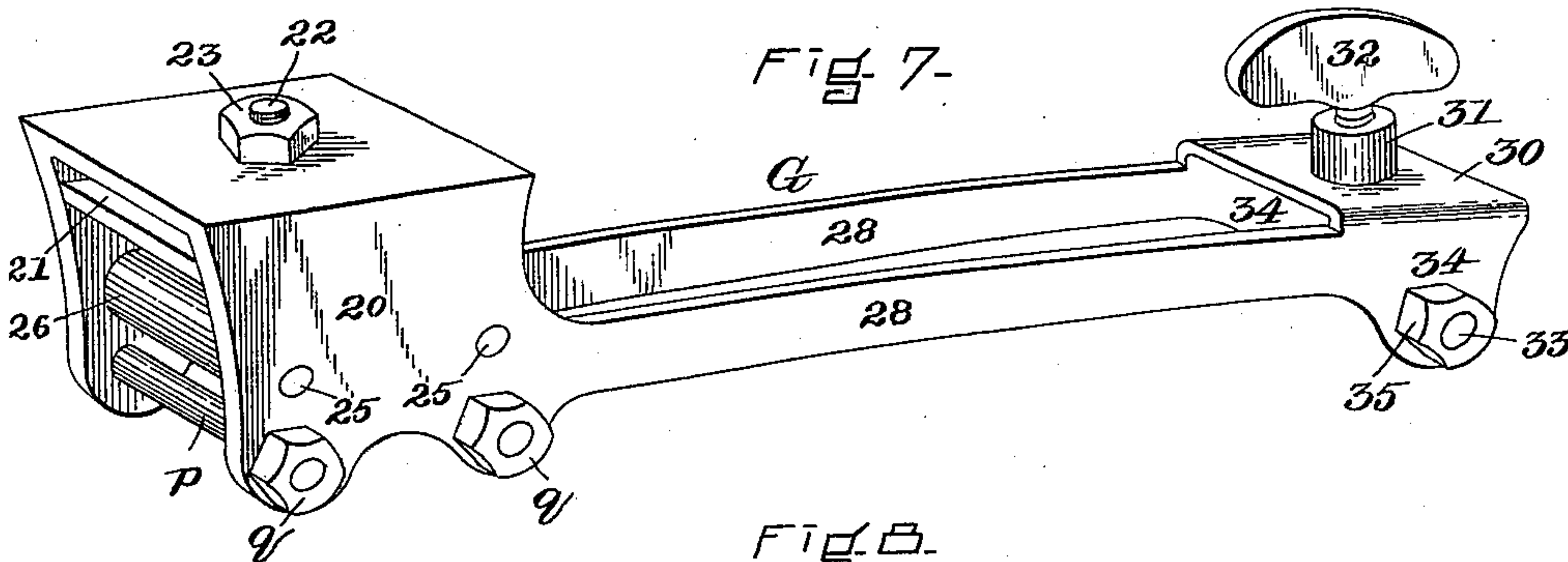
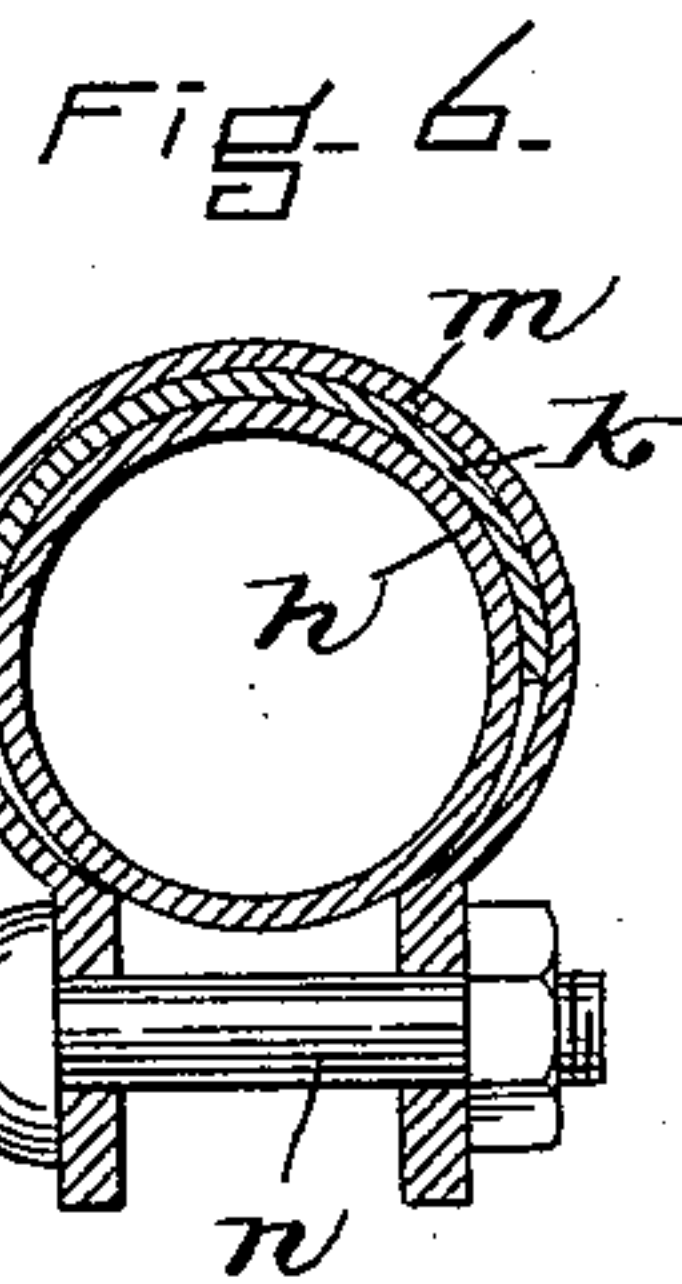
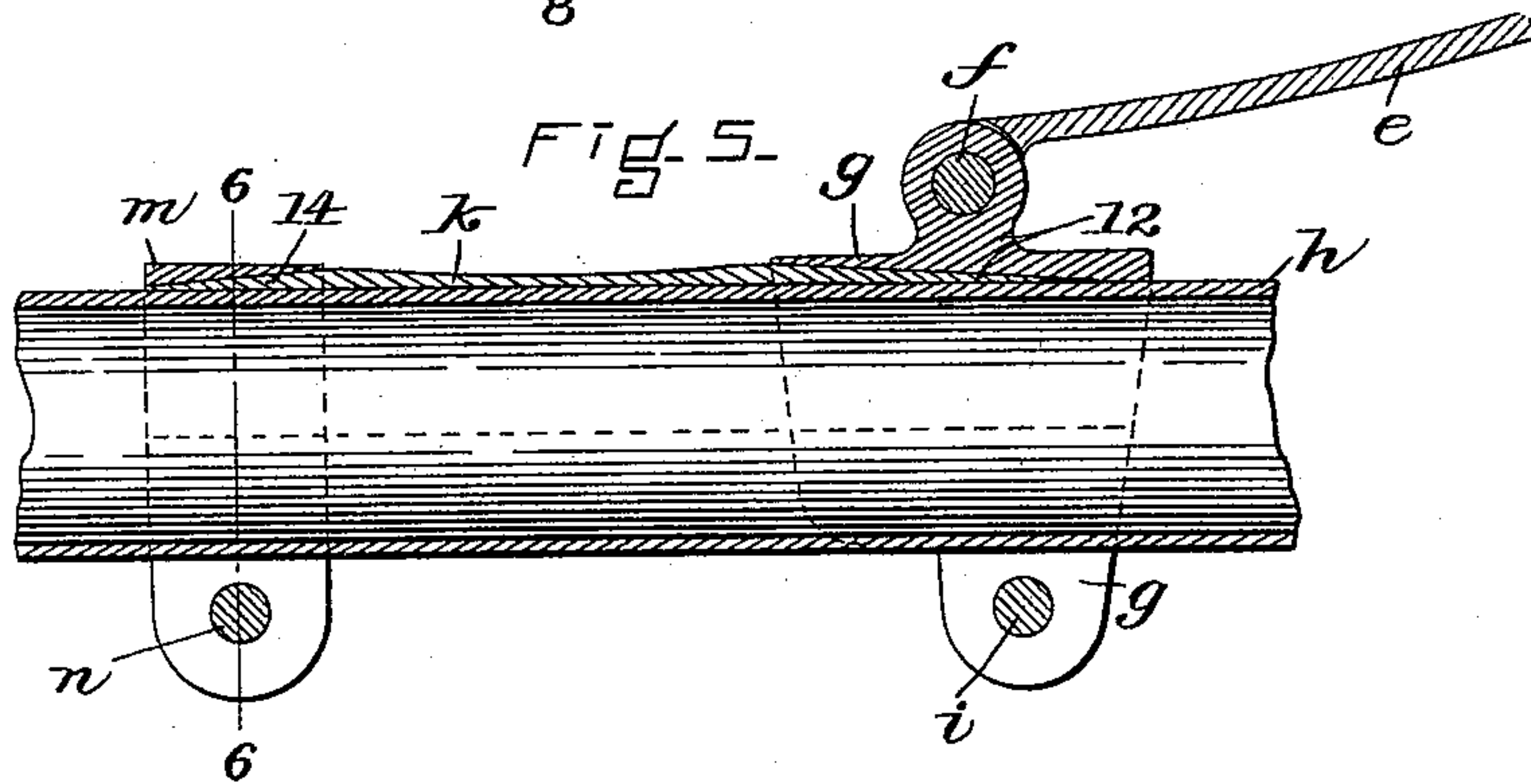
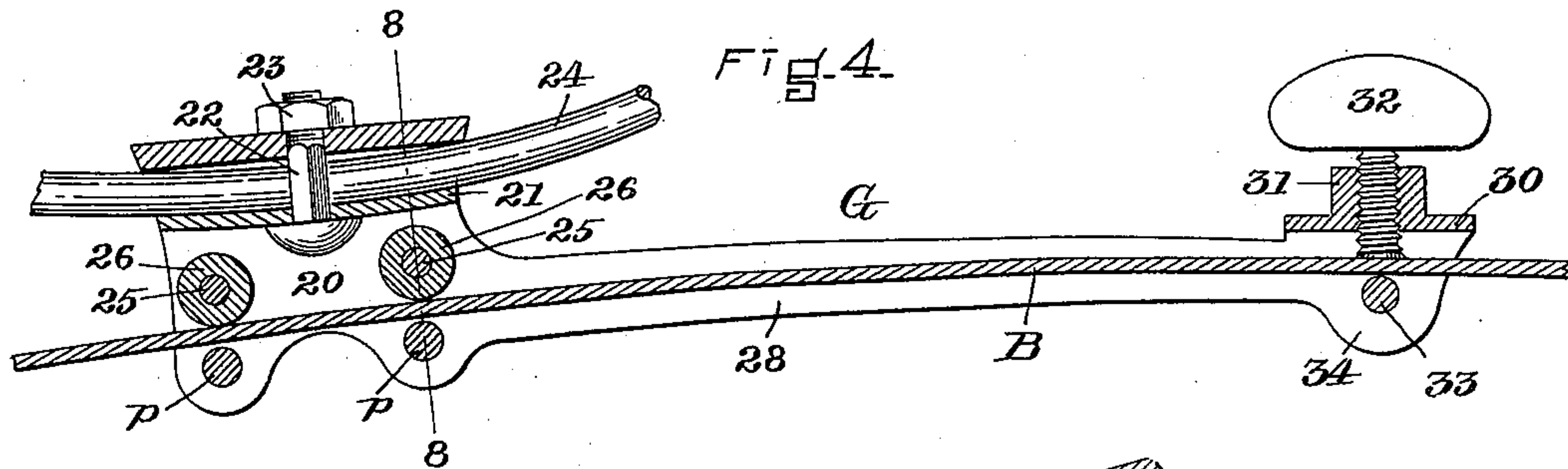
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2 Sheets—Sheet 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES F. WEBBER, OF BOSTON, MASSACHUSETTS.

BICYCLE-SADDLE ADJUSTING DEVICE AND SPRING.

SPECIFICATION forming part of Letters Patent No. 607,148, dated July 12, 1898.

Application filed July 24, 1897. Serial No. 645,836. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WEBBER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Bicycle-Saddle Adjusting Device and Spring, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a bicycle having my saddle adjusting device and spring applied thereto. Fig. 2 is an enlarged side elevation of my saddle adjusting device and spring and a portion of the top bar of the bicycle-frame to which it is applied. Fig. 3 is a plan of the parts shown in Fig. 2, the saddle being shown in dotted lines. Fig. 4 is a longitudinal vertical section on the line 4 4 of Fig. 3. Fig. 5 is an enlarged vertical section of a portion of the top bar and the clamping device by means of which the front portion of the spring which supports the saddle-adjusting device is secured thereto. Fig. 6 is a transverse vertical section on the line 6 6 of Fig. 5. Fig. 7 is a perspective view of the saddle-supporting slide. Fig. 8 is a transverse vertical section on the line 8 8 of Fig. 4.

Bicycle-saddles have usually been made adjustable longitudinally upon a rigid bar by means of nuts and bolts so arranged as to render it necessary for the rider to dismount and use a wrench whenever the change was to be made. My invention has for its object to overcome this difficulty and provide a device by means of which a bicycle-saddle may be safely and conveniently adjusted on a supporting-spring in a longitudinal direction by the rider while seated upon it, thus avoiding the necessity of dismounting whenever the saddle requires to be adjusted forwardly or rearwardly—as, for instance, in going up or down a hill.

To this end my invention consists in certain novel combinations of parts and details of construction, as hereinafter fully set forth, and specifically pointed out in the claims.

In the said drawings, A represents a bicycle-frame of the usual construction, to the seat-post *b'* of the rear or seat-post tube *b* of which is secured, by means of a hinge-joint *c*, a long flat spring B, preferably of slightly-

convex form in the direction of its length, as shown in Figs. 1 and 2, and having hinged to its front end at *d* a supplementary piece or member *e*, extending thereunder, and hinged at *f* to a clamping-strap *g*, which embraces the top bar *h* of the frame A and is secured thereto by a bolt *i*, provided with a nut.

k is a plate of semicircular form in cross-section, which fits snugly over the upper half of the top bar *h*, its front end 12, which is made tapering or wedge-shaped, extending under the clamping-strap *g*, as shown in Fig. 5. Over the opposite end 14 of the semicircular plate *k*, which is also made tapering or wedge-shaped, fits another clamping-strap *m*, similar to the strap *g*, and likewise held in place by a bolt *n*, provided with a nut, said clamp holding the rear end of the plate *k* closely down upon the top bar *h*.

The plate *k* serves to reinforce and strengthen the top bar *h* at the point where it sustains the weight of the rider, thus preventing the bending of the bicycle-frame, and any tendency of the strap *g* to be forced rearwardly by downward pressure upon the spring B will cause it to ride up on the inclined front end of the plate *k* immediately thereunder, whereby it is wedged still more tightly in place, while any tendency of the said plate *k* to slide rearwardly will cause its inclined rear end to be wedged more tightly under the rear clamping-strap *m*, the double wedging action thus produced affording great security and preventing any possibility of the clamping-strap *g* slipping rearwardly on the top bar *h* when the spring B is subjected to excessive tension.

Upon the spring B is placed a slide G, the rear portion 20 of which is shaped like a box and has secured to its top by means of a plate 21 and a square bolt 22 and nut 23 the wire supports 24 of the saddle H. Between the sides of the box-like portion 20 are mounted on transverse rods 25 antifriction-rolls 26, which rest upon the upper surface of the spring B, as shown in Figs. 4 and 8, and enable the slide to be easily moved upon the spring in the direction of its length, as may be desired, to vary the position of the saddle and thereby enable the rider to sit well forward and over the pedals when ascending a hill or change his position as far back as desired when descending a hill, either when

back-pedaling or coasting, or to rest his muscles when desired. The slide G is held in place upon the spring B by means of transverse rods or bolts *p*, extending across the lower portion of the box 20 beneath and close to the spring, said rods being held in place by means of nuts *q*, screwed onto their opposite ends.

Formed integral with the rear portion of the slide G is an extension composed of two side pieces or arms 28, which lie upon opposite sides of the spring B and are connected at their front ends by a top plate 30, forming a box-like enlargement similar to but smaller than that at the rear end of the slide, and through a boss or hub 31 on said top plate 30 passes a vertical thumb-screw 32, by means of which the slide G may be securely clamped to the spring B when adjusted in position thereon by forcing said spring down onto a transverse bolt 33 extending beneath said spring through lugs or ears 34 at the front ends of the side pieces 28, said bolt being secured in place by a nut 35.

The bottom of the clamping-screw 32 is preferably upset or slightly enlarged, as shown in Fig. 4, thereby preventing it from being withdrawn from the hub and accidentally lost.

The end of the slide which carries the clamping-screw 32 is located in front of the saddle, as shown in Figs. 1 and 2, in which position it can be conveniently reached and operated by the rider while seated, thereby enabling him to easily change the position of the saddle upon its supporting spring or bar without dismounting, an advantage which will be greatly appreciated by all riders of bicycles. It will be seen that the space between the side bars 28 is open at the top and bottom, so that the flexure of the spring is not interfered with by the slide G. This is shown clearly in Fig. 4.

By the employment of a long spring B for supporting the saddle much more comfort is secured with less liability of "losing the pedals" if an obstruction is encountered. By changing the position of the saddle upon the spring the elasticity of the seat may be increased or diminished, as desired, the rear end of the spring offering the least elasticity, whereby a well-known danger incident to most previous spring devices is obviated—viz., a spring of easy elasticity upon level ground becoming positively dangerous while coasting.

With my improved saddle-adjusting device no wrench or other implement is required to effect a change of position of the saddle upon its support, the adjustment being effected by means of the thumb-screw 32, which when loosened permits the slide to move freely along the spring to the position desired while the rider is seated upon the saddle, and the danger resulting from jolting and overtaking the muscles and nerves and other delicate portions of the body, due to incorrect positions of riders and strain from too long con-

tinued exertion without change of position and action, is thereby reduced to a minimum.

In order to adjust the height of the spring B, so as to raise and lower the seat H to suit different riders, it is simply necessary to adjust the seat-post *b'* up or down, as usual, and then adjust the clamp *g k m* along the top bar *h* toward or from the seat-post. Thus to elevate the spring B first adjust the seat-post upwardly in the usual manner and then move the clamp *g k m* forwardly along the bar *h*. The spring B may be adjusted down close to the top bar *h*, since there is nothing between the two save the member *e* and the bolts *p p* and 33. The inclination of the spring may be modified by properly adjusting the said clamp along the bar.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A saddle-supporting spring for bicycles, provided at its rear with a post to enter the rear or seat-post tube and having pivoted to its forward end a lower rearwardly-extending member, and a clamp on the rear end of said member to engage the top frame bar or tube, substantially as described.

2. A saddle-supporting spring for bicycles, provided at its rear end with a pivotally-connected seat-post to enter the rear or seat-post tube, and having pivoted to its forward end a lower rearwardly-extended member, and a clamp pivotally connected to the rear end of said member and adapted to engage the top frame bar or tube, substantially as described.

3. The combination with a longitudinally-extending seat-supporting spring, of an elongated slide adjustable along the spring and open between its ends to permit the spring to bow or curve under the weight of the rider, a saddle-clamp on the rear end of the slide and an adjusting device at its forward end substantially as described.

4. A saddle-supporting slide comprising a box-like front and rear members open at their ends for the passage of a spring there-through and having parallel elongated side connecting-bars, a seat-clamp on the rear box-like member and a set-screw extending through the front box-like member; the front box-like member being far enough in advance of the corresponding rear member to expose the set-screw beyond the pommel of the saddle and within the reach of the rider, substantially as described.

5. The combination with the longitudinal spring having means for connecting its ends to a bicycle-frame, of a slide having parallel side bars at opposite edges of the spring, front and rear cross-pieces connecting the side bars above the spring, a saddle-clamping plate under the rear cross-bar, a bolt connecting the plate and cross-bar; upper and lower cross-pieces or bolts below the clamping-plate and between which the spring extends, a cross-piece or bolt under the spring at the front end of the slide and a set-screw extending down through the forward upper

cross-piece into engagement with the spring, substantially as described.

6. The combination with a bicycle, of a spring hinged at its rear end to the upper end
5 of the seat-post, and extending longitudinally above the top bar toward the head and provided with a hinged, lower extension having a clamp adjustable along the top bar, and a saddle-supporting slide mounted on the
10 spring, provided at its rear end with a saddle-

clamp and at its front end with means for clamping it to the spring, substantially as described.

Witness my hand this 20th day of July,
A. D. 1897.

CHARLES F. WEBBER.

In presence of—

P. E. TESCHEMACHER,
MARTIN M. SIMMON.