

(No Model.)

2 Sheets—Sheet 1.

W. LINDNER.
VELOCIPEDE SEAT.

No. 464,508.

Patented Dec. 8, 1891.

Fig. 1.

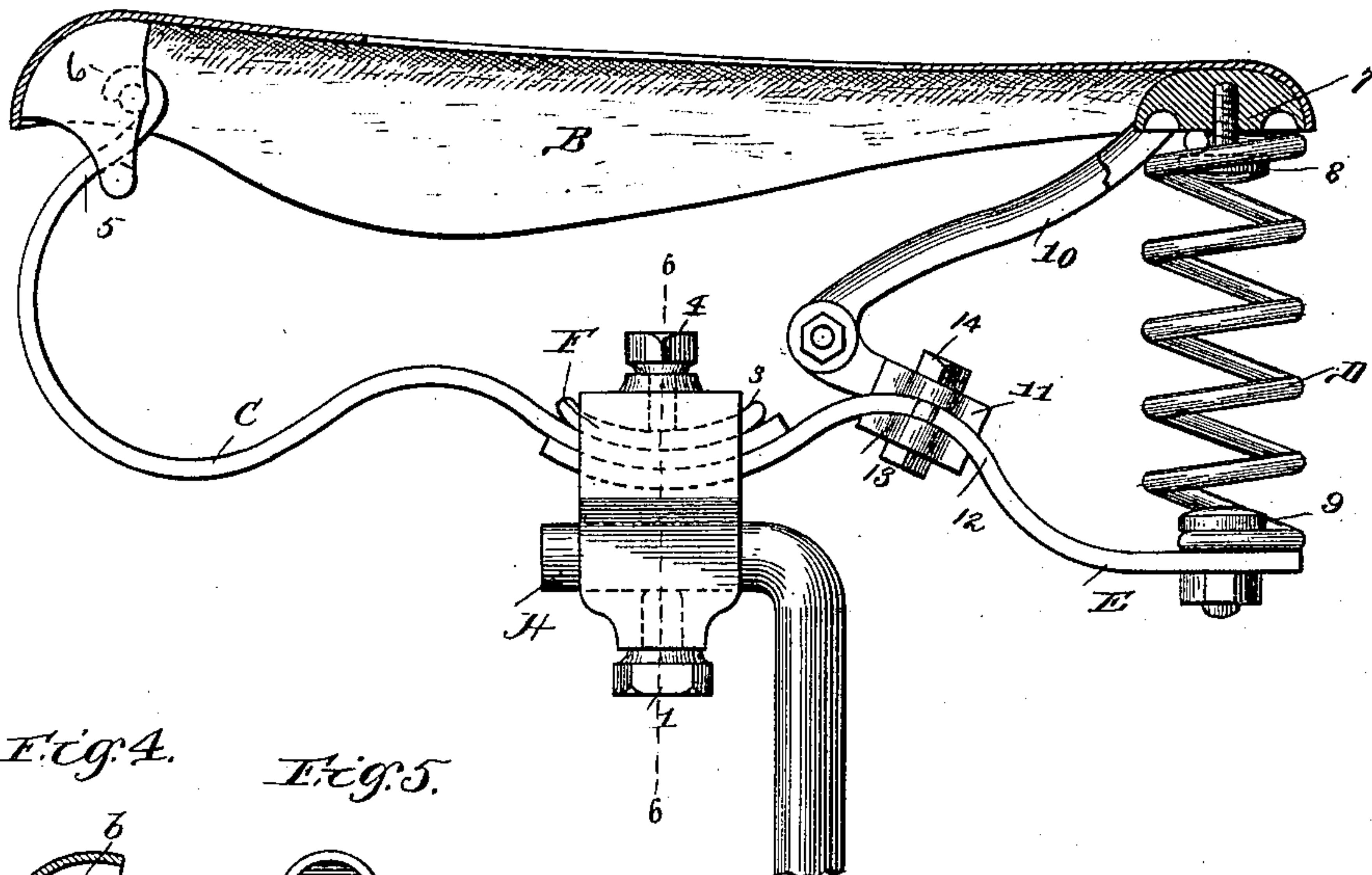


Fig. 4.

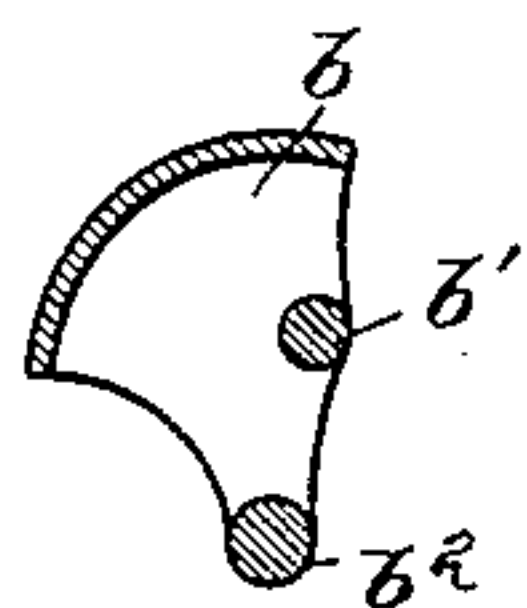


Fig. 5.

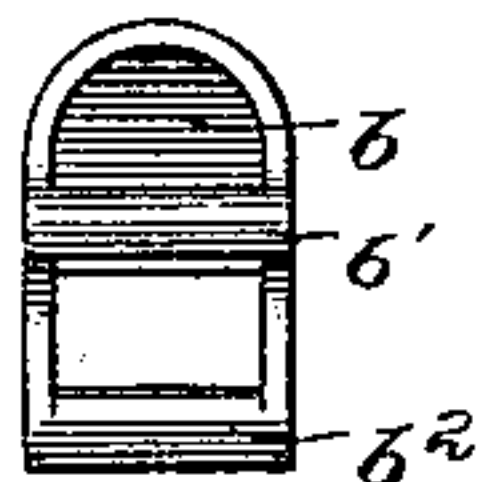


Fig. 2.

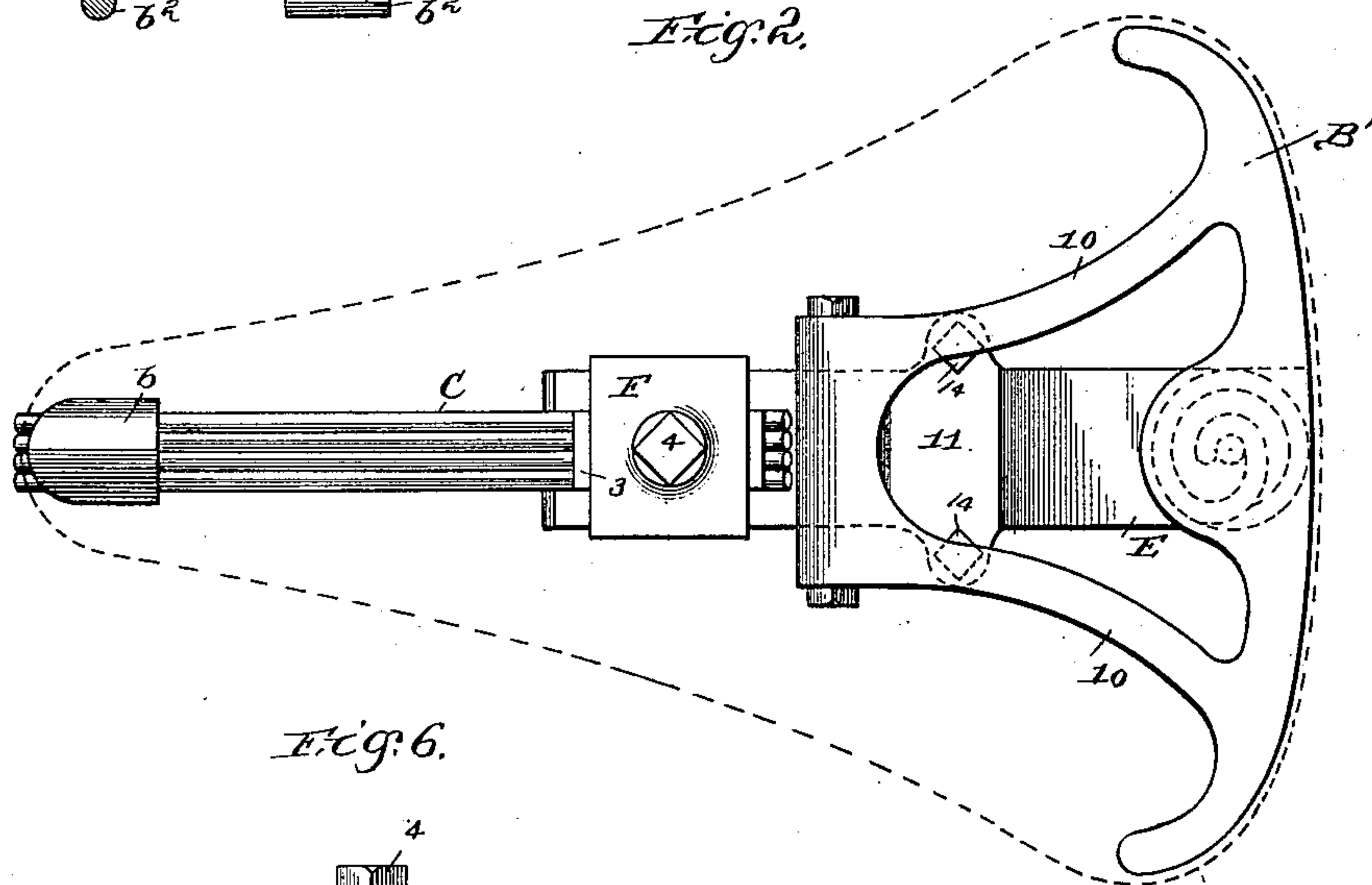
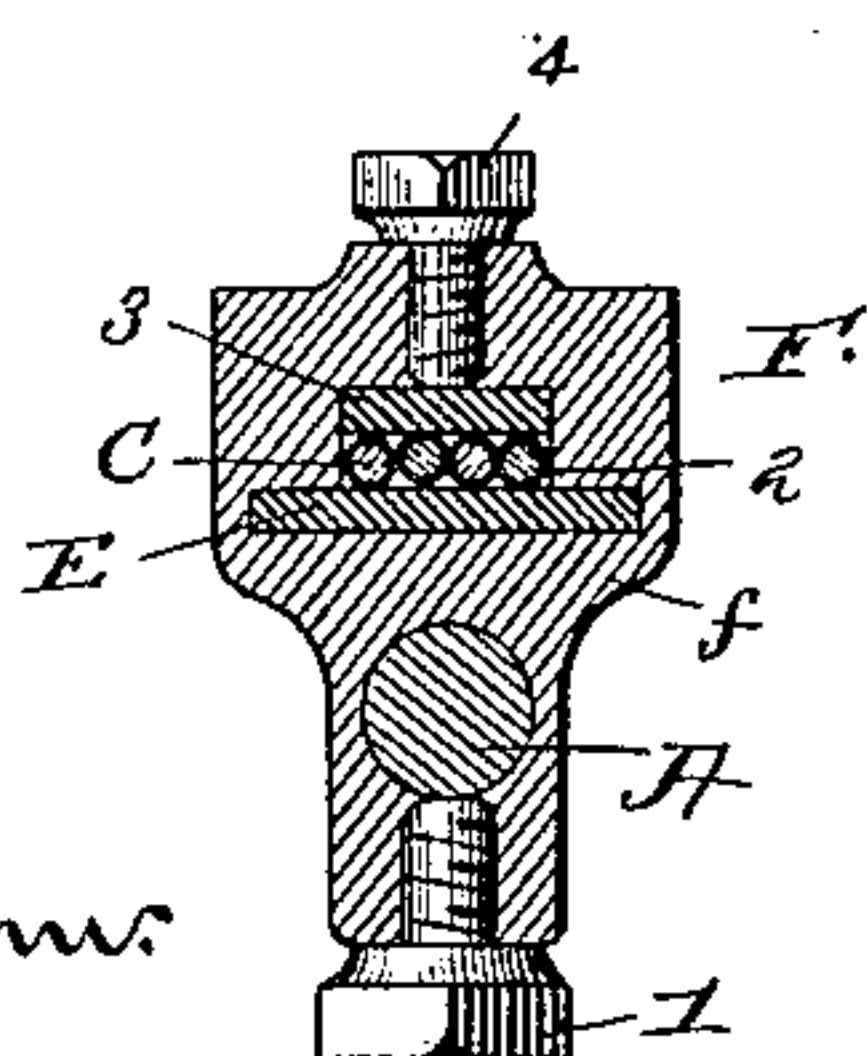


Fig. 6.



Witnesses

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Atty's.

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2 Sheets—Sheet 2.

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Fig. 3.

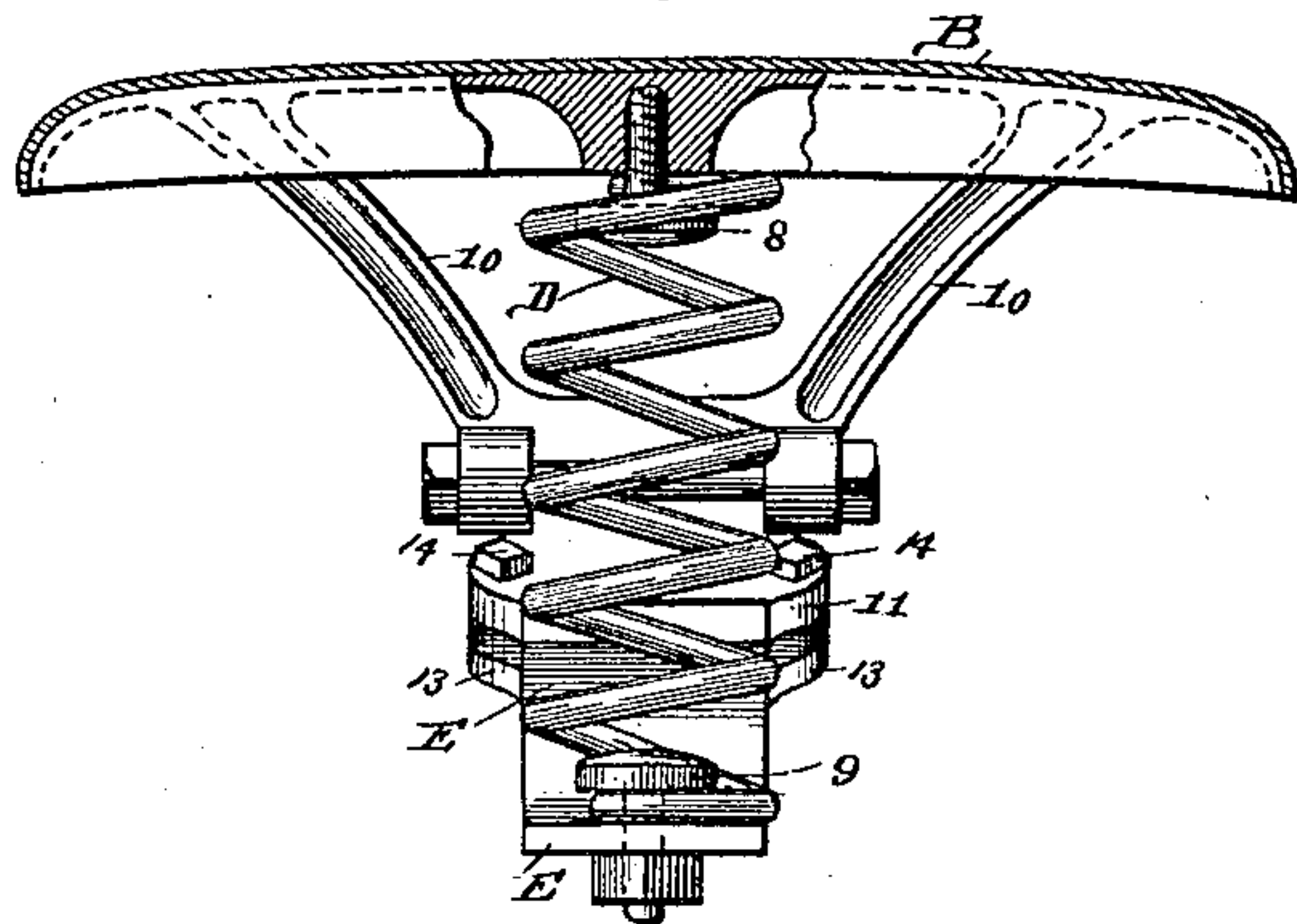


Fig. 7.

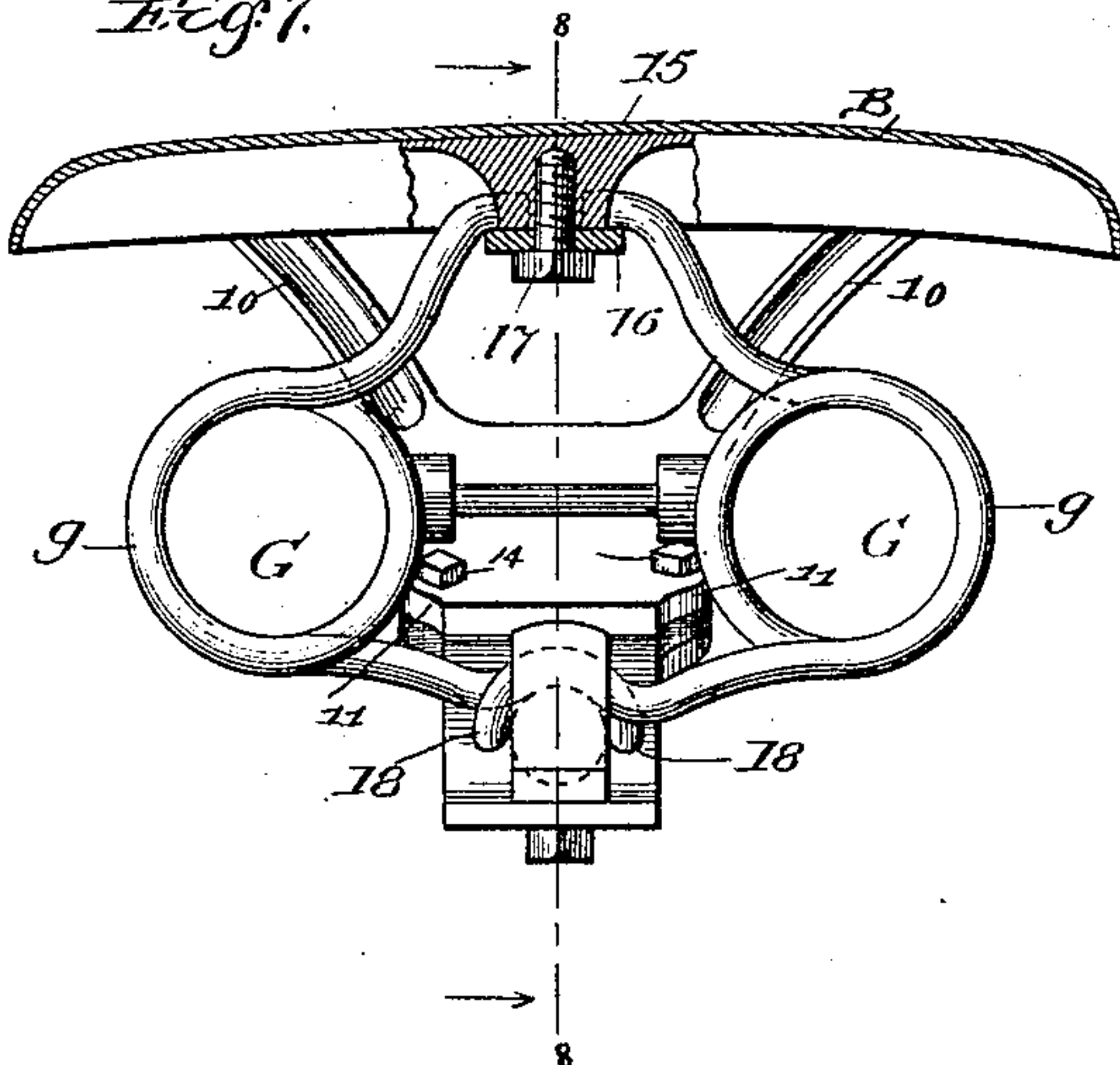


Fig. 8.

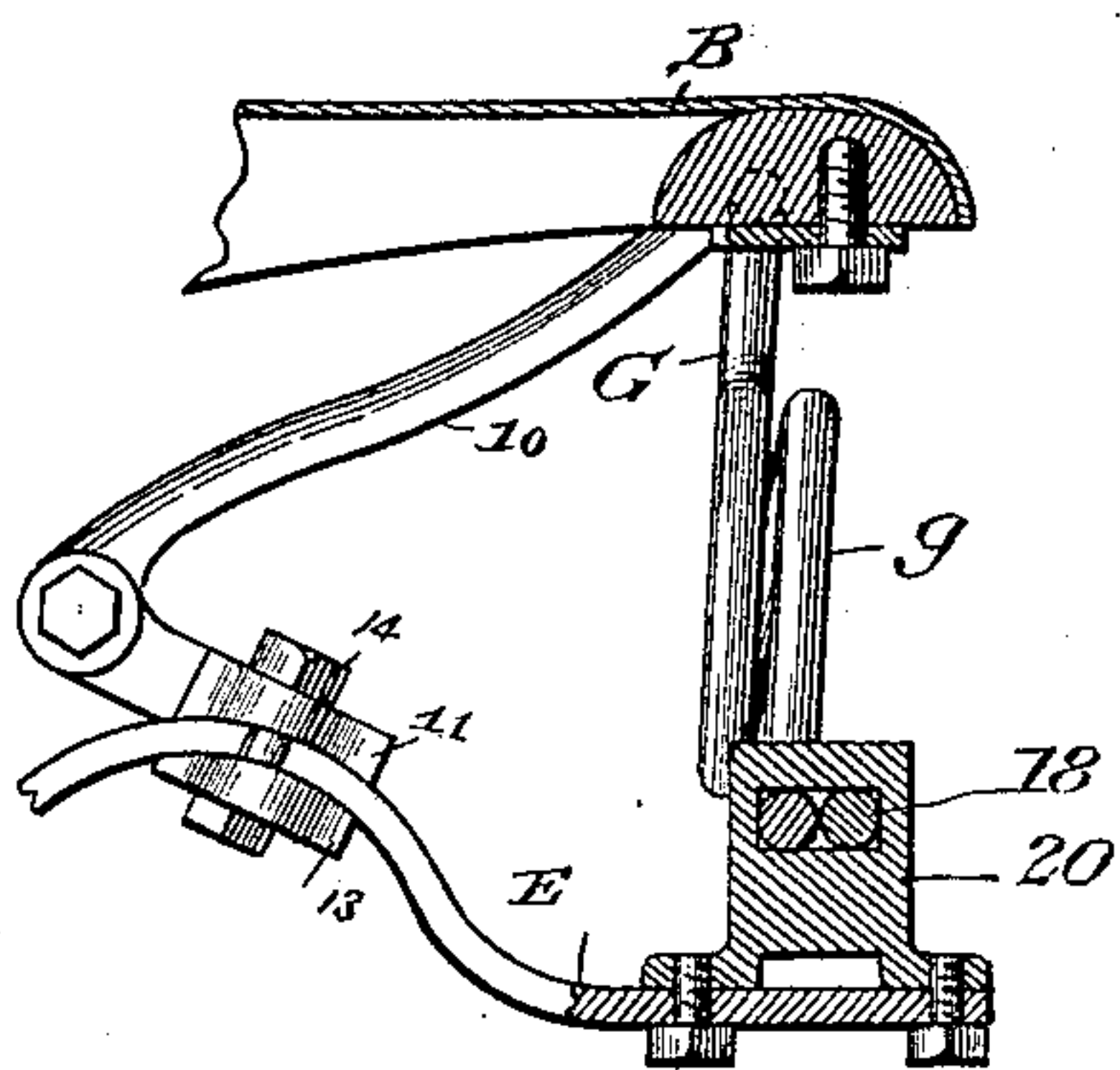
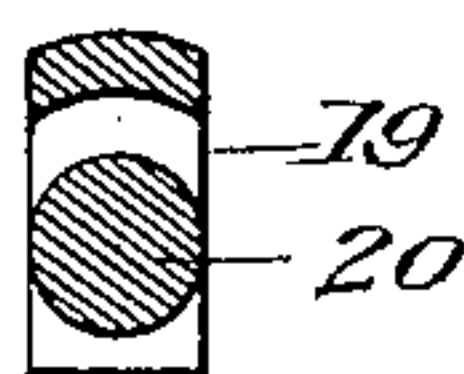


Fig. 9.



Witnesses.

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UNITED STATES PATENT OFFICE

WILLIAM LINDNER, OF CHICAGO, ILLINOIS.

VELOCIPED-SEAT.

SPECIFICATION forming part of Letters Patent No. 464,508, dated December 8, 1891.

Application filed February 24, 1891. Serial No. 382,599. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LINDNER, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Velocipede-Seats, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to velocipede seats or saddles, the object being to provide a saddle that can be adjusted to conform to the weight of the person to be supported in a simple, durable, economical, and efficient manner.

15 The invention consists in the features of construction and combinations of parts hereinafter fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a saddle constructed in accordance with my invention, certain parts being shown in section for convenience of illustration. Fig. 2 is a plan view of the same with the seat shown in the dotted lines. Fig. 3 is a rear elevation, partly in section. Figs. 4 and 5 are detail views in vertical section and end elevation, respectively, of the hooking-plate at the front end of the saddle. Fig. 6 is a vertical section on the line 6 6 of Fig. 1. Fig. 7 is a rear elevation, partly in section, of a modified form of construction embodying my invention. Fig. 8 is a vertical section of the same on the line 8 8, and Fig. 9 is a detail in section.

35 In accordance with the broad principle involved by my invention I support one end of the velocipede-seat, preferably the front end, by a spring. The rear end is supported by a swinging connecting piece or arm, which is secured at its rear end to the rear end portion of the seat and extends forwardly and downwardly, and is pivoted at its forward end to a suitable support, which may be the same as the support for the stretching-spring. It will be noted, therefore, that when a person mounts the saddle, the rear part being subjected to the greatest weight, said rear part will be depressed and the rear end portion of the seat will move through the arc of a circle around the pivotal point of the connecting piece or arm as a center in an obvious man-

ner. The rear edge of the seat in moving as described draws the seat rearward against the action of the stretching-spring, and said spring serves to keep the seat under tension. 55 The rearward movement of said seat will also be limited relatively to the strength of the spring and the weight to be supported.

To adapt the saddle for use by persons of different weights, the pivotal point of said 60 connecting piece or arm is adjustable, so that its rear end can be made to pass farther to the rear when the seat is depressed, and vice versa, whereby the tension upon the spring is varied. I find it convenient to pivot said 65 swinging arm upon a spring-arm and also upon a downwardly and rearwardly inclined portion thereof, to prevent the rear end of said arm being elevated too high when the pivotal point of the arm is moved to the rear. 70

The particular construction of the saddle is as follows:

Referring to Figs. 1 to 6, both inclusive, of said drawings, A indicates the standard upon which the saddle is supported. The seat 75 proper B, of familiar construction, is supported at its front and rear ends by suitable springs, which are in turn secured to and supported by a suitable support, preferably the said standard A. In accordance with the 80 principle involved by my invention the front end of the seat is supported by a stretching-spring C and the rear and wide end of the seat by a bearing-spring D. The said bearing-spring D is carried by a spring-arm E. 85 The inner end portions of the stretching-spring C and spring-arm E are carried, as shown, and rigidly secured to each other and also with relation to the standard by means of a clamp F, Figs. 1 and 6. The lower portion of the clamping-block f is provided with a bearing-aperture for receiving the standard and a screw 1 for securing the same. In the upper part of the said block f a longitudinal opening 2 is made and the inner ends of the 95 spring-arm and stretching-spring are inserted therein. A clamping-plate 3, located in the upper part of the opening 2, is acted upon by a screw 4 and serves to clamp the ends of the said stretching-spring and spring-arm. It 100 will thus be seen that by varying the extent of the insertion of the end portions of the

stretching-spring and spring-arm into the clamp the tension upon the seat will be varied.

The stretching-spring C is composed of a plurality of members *c c*, conveniently round in cross-section and placed next to each other. The said spring C is provided at its front end with an upwardly and rearwardly bent portion 5 and a hooked end 6. To the front end of the seat B is secured an inverted-V-shaped hooking-plate *b*, Figs. 1, 4, and 5, having cross-pins *b' b'*. The hooked end 6 of the spring C engages with the upper cross-pin *b'*, while the bent portion 5 of said spring C bears against the lower cross-pin *b'*, thereby providing a simple and efficient pivotal connection between the stretching-spring and seat.

An arched bearing-plate *B'* is secured at its rear edge to the rear edge of the seat, and is capable of a limited swinging movement with relation thereto, the purpose of which will be fully explained hereinafter. The bearing-spring D is secured to a stud 7, located about midway the ends of said bearing-plate, preferably by a screw 8, which stud 7 is located over the outer end of the spring-arm E, and to the outer end of said spring-arm E the other end of said bearing-spring D is secured, preferably by a screw-bolt 9. The said bearing-spring and spring-arm serve to support the greater part of the weight received by the saddle-arm.

I have provided means whereby the tension upon the seat B can be varied so as to adapt the saddle to the weight of the person using the same. To this end the bearing-plate *B'* is provided with a forwardly and downwardly projecting arm comprising two members 10, joined at their front ends and pivoted to a sliding block 11, adjustably secured to a bend 12 in the spring-arm E by a clamping-plate 13 and screws 14. The said block is rigidly secured to said spring-arm by the devices described; but its location thereon can be changed.

It will be noted, as above pointed out, that when a person mounts the saddle, the rear part of the seat being subjected to the greatest weight, that part of the saddle will be depressed against the action of the bearing-spring D and spring-arm E, and the rear edge of said seat will move through the arc of a circle around the pivotal point of the arms 10 as a center. The rear edge of the seat in moving as described will draw the seat as a whole on the arm and against the action of the stretching-spring, which serves to keep the seat under tension, and also to limit the rearward movement of said seat according to the strength of said stretching-spring. It will be noted, therefore, that should the block 11 be moved to the rear in Fig. 1 it will cause the rear edge of the seat to pass farther to the rear in turning upon its pivot, and hence subject the stretching-spring to a greater tension. In this way the saddle is capable of supporting a greater weight, since the descent

of the rear part of the seat against the action of the bearing-spring D is regulated and controlled by the tension upon the stretching-spring. To adapt the saddle for use by a lighter person, the sliding block or the pivotal point of the arms 10 is moved forward.

In Figs. 7, 8, and 9 is shown a modified form of construction embodying my invention.

In Figs. 1, 2, and 3 the bearing-spring D is shown as a spiral spring; but it is obvious that various forms of springs can be employed.

In said Figs. 7 and 8 two springs *G G* are shown having bends *g g*. The upper ends of said springs *G* are inserted within a recess or notch in a thickened portion 15 of the bearing-plate *B'* and secured therein by a plate 16 and a screw 17. The lower ends of said springs *G* are bent or hooked, as shown at 18, and are inserted within a curved bearing-aperture 19 in a block 20, secured to the rear end of said spring-arm E. The principle of the operation of this form of spring is the same as that hereinbefore described.

It will be understood, of course, that the sliding block 11 is mounted upon the spring-arm for convenience and simplicity of construction, so that, except in the claims for the specific construction, I contemplate mounting the said sliding block upon any suitable arm. It will be further noted that the bend 12 in the arm upon which the block rides serves to prevent the rear end of the seat being elevated too much when the said sliding block and arms 10 are moved to the rear.

I claim as my invention—

1. A velocipede-saddle comprising a seat supported by a spring at one end, a support for said spring, and a connecting-piece connected at one end with the other end portion of said seat and extending along and under said seat and having a pivotal connection at its front end with a suitable stationary support, said stationary support being adjustable.

2. A velocipede-saddle comprising a seat supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end portion of said seat and having a pivotal connection at its front end with a suitable stationary support, said stationary support being adjustable.

3. A velocipede-saddle comprising a seat supported by a spring at one end, a support for said spring, and a connecting-piece connected at one end with the other end portion of said seat and extending along and under said seat and having a pivotal connection at its front end with a suitable stationary support, said stationary support being longitudinally adjustable.

4. A velocipede-saddle comprising a seat supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end of said seat and having a pivotal connection at its front end with a suitable stationary support, said stationary support being longitudinally adjustable.

5. A velocipede-saddle comprising a seat

supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end portion of said seat and having a stationary pivotal connection at its front end to a spring-arm.

6. A velocipede-saddle comprising a seat supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end portion of said seat and having an adjustable pivotal connection at its front end with a spring-arm.

7. A velocipede-saddle comprising a seat supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end portion of said seat and having a stationary pivotal connection at its forward end with an inclined support, said connection being adjustable.

8. A velocipede-saddle comprising a seat supported at its front end by a spring, and a forwardly-projecting connecting-piece secured to the rear end portion of said seat and having a stationary pivotal connection at its forward end with a downwardly and rearwardly inclined support, said connection being adjustable.

9. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring for supporting the rear end portion of said seat, a support for said springs, and a connecting-piece connected with said saddle and pivoted to a suitable support in advance of its connection with said saddle, said pivot being stationary.

10. A velocipede-saddle comprising a seat supported by springs at its front and rear end portions, a support for said springs, and a connecting-piece connected with said seat adjacent to one end of the same, said connecting-piece extending toward the other end of said seat and having a pivotal connection with a suitable stationary support, said stationary support being adjustable.

11. A velocipede-saddle comprising a seat supported by springs at its front and rear end portions, a support for said springs, and a connecting-piece connected with said seat adjacent to one end of the same, said connecting-piece extending toward the other end of the seat and having a pivotal connection with a suitable stationary support, said stationary support being longitudinally adjustable.

12. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for said springs, said bearing-spring being connected with a bearing-plate having a forwardly-projecting arm having a pivotal connection at its forward end with a suitable stationary support, said stationary support being adjustable.

13. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for

said springs, said bearing-springs being connected with a bearing-plate secured to said seat, said bearing-plate having a forwardly-projecting arm having a pivotal connection at its forward end with a suitable stationary support, said stationary support being longitudinally adjustable.

14. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for said springs, and a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a stationary block carried by a suitable support, said block being adjustable back and forth.

15. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for said springs, and a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a stationary block carried by and adjustable back and forth on an inclined support.

16. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for said springs, and a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a stationary block carried by and adjustable back and forth on a rearwardly and downwardly inclined support.

17. A velocipede-saddle comprising a seat supported at its forward end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a sliding block carried by a spring-arm, which also supports said bearing-spring, and a support for said stretching-spring and spring-arm.

18. A velocipede-saddle comprising a seat supported at its forward end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a sliding block, said sliding block being carried by the inclined portion of a spring-arm, which also supports said bearing-spring, and a support for said stretching-spring and spring-arm.

19. A velocipede-saddle comprising a seat supported at its forward end by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a forwardly-projecting arm secured to the rear end portion of said seat and having a pivotal connection at its forward end with a sliding block, said sliding block being carried by the rearwardly and downwardly inclined portion of a spring-

arm, which also supports said bearing-spring, and a support for said stretching-spring and spring-arm.

20. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a support for said springs, and a forwardly-projecting arm secured to the rear end portion of said seat and pivoted at its forward end to an arm projecting from a sliding block carried by a suitable support.

21. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-plate secured to the rear end portion of said seat, a bearing-spring secured to a stud upon said bearing-plate, a support for said springs, and a forwardly-projecting arm connected with said bearing-plate and pivoted at its forward end to a suitable support.

22. A velocipede-saddle comprising a seat supported at its front end portion by a stretching-spring, a bearing-spring supporting the rear end portion of said seat, a spring-arm upon which the bearing-spring is mounted, a forwardly-projecting arm secured to the rear end portion of said seat and pivoted to said spring-arm, and a support for said stretching-spring and spring-arm.

23. A stretching-spring for a velocipede-saddle, embracing a plurality of disconnected members.

24. The combination, substantially as hereinbefore set forth, in a velocipede-saddle, of a seat, a bearing-spring for the rear end portion thereof, a stretching-spring having a hooked end for engagement with a hooking-plate secured to the front end portion of the seat, and a support for said springs.

25. The combination, substantially as hereinbefore set forth, in a velocipede-saddle, of a seat, a bearing portion for the rear end portion thereof, a stretching-spring having an upwardly-bent and hooked end, a hooking-plate secured to the front end portion of said

seat and provided with a pin b' for engaging with said hooked end of the stretching-spring, and a pin b^2 , against which the bent portion of said spring rests, and a support for said springs.

26. A velocipede-saddle comprising a seat, a stretching-spring for the front end portion thereof, and a bearing-spring comprising a plurality of disconnected members secured at their upper ends to the rear end portion of said seat, and a support for the stretching-spring and the lower ends of said members of said bearing-spring.

27. A velocipede-saddle comprising a seat, a stretching-spring for the front end portion thereof, a bearing-spring comprising a plurality of disconnected members secured at their upper ends to the rear end portion of the seat and at their lower ends to a spring-arm, and a support for said stretching-spring and spring-arm.

28. A velocipede-saddle comprising a seat, a stretching-spring for the front end portion thereof, a bearing-spring comprising a plurality of members having their upper ends secured within a recess in a bearing-plate secured to the rear end portion of said seat, and a support for the stretching-spring and the lower ends of said members of the bearing-spring.

29. A velocipede-saddle comprising a seat, a stretching-spring for the front end portion thereof, a bearing-spring comprising a plurality of members secured at their upper ends to the rear end portion of the seat and provided with hooked lower ends, a bearing-block having a bearing-aperture 19 for the hooked ends of said spring, and a support for said stretching-spring and said bearing-block.

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

WILLIAM LINDNER.

Witnesses:

WILLIAM H. LOTZ,

HARRY COBB KENNEDY.