

No. 630,912.

Patented Aug. 15, 1899.

A. J. MORISON.
CYCLE SADDLE AND SUPPORT.

(Application filed Dec. 27, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig.1.

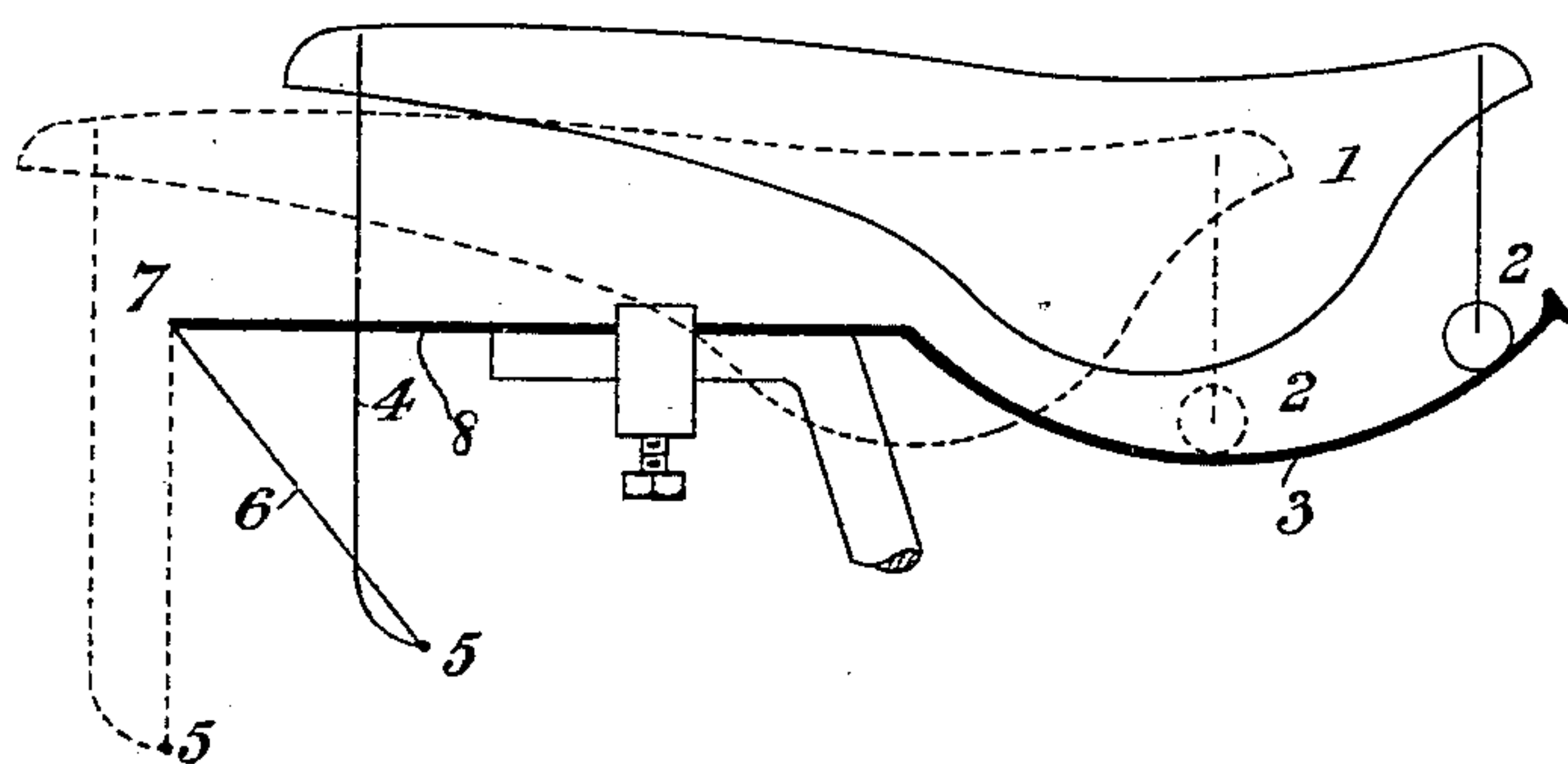
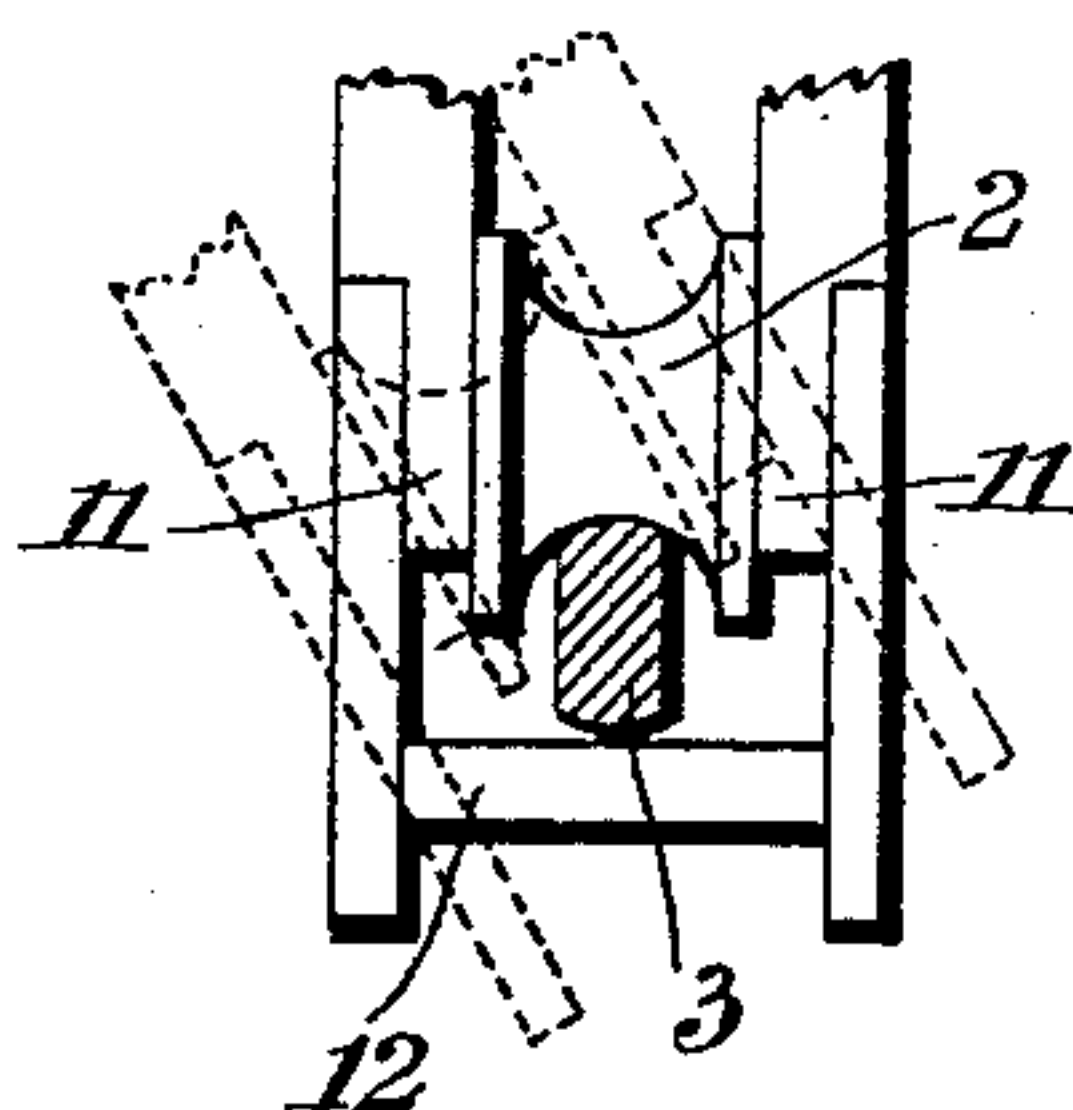


Fig. 5.



Witnesses.

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2 Sheets—Sheet 2.

Fig. 2.

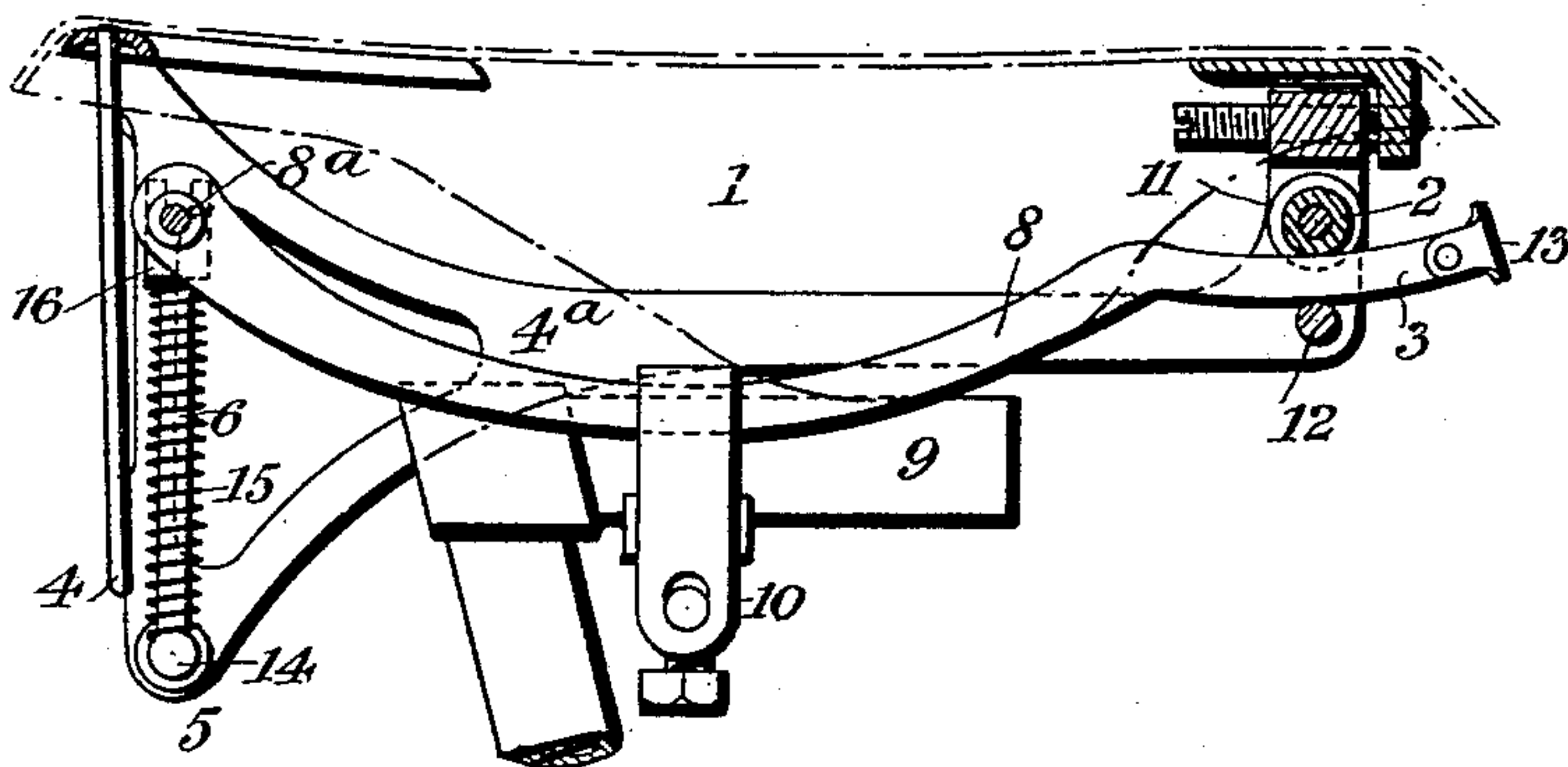


Fig. 4.

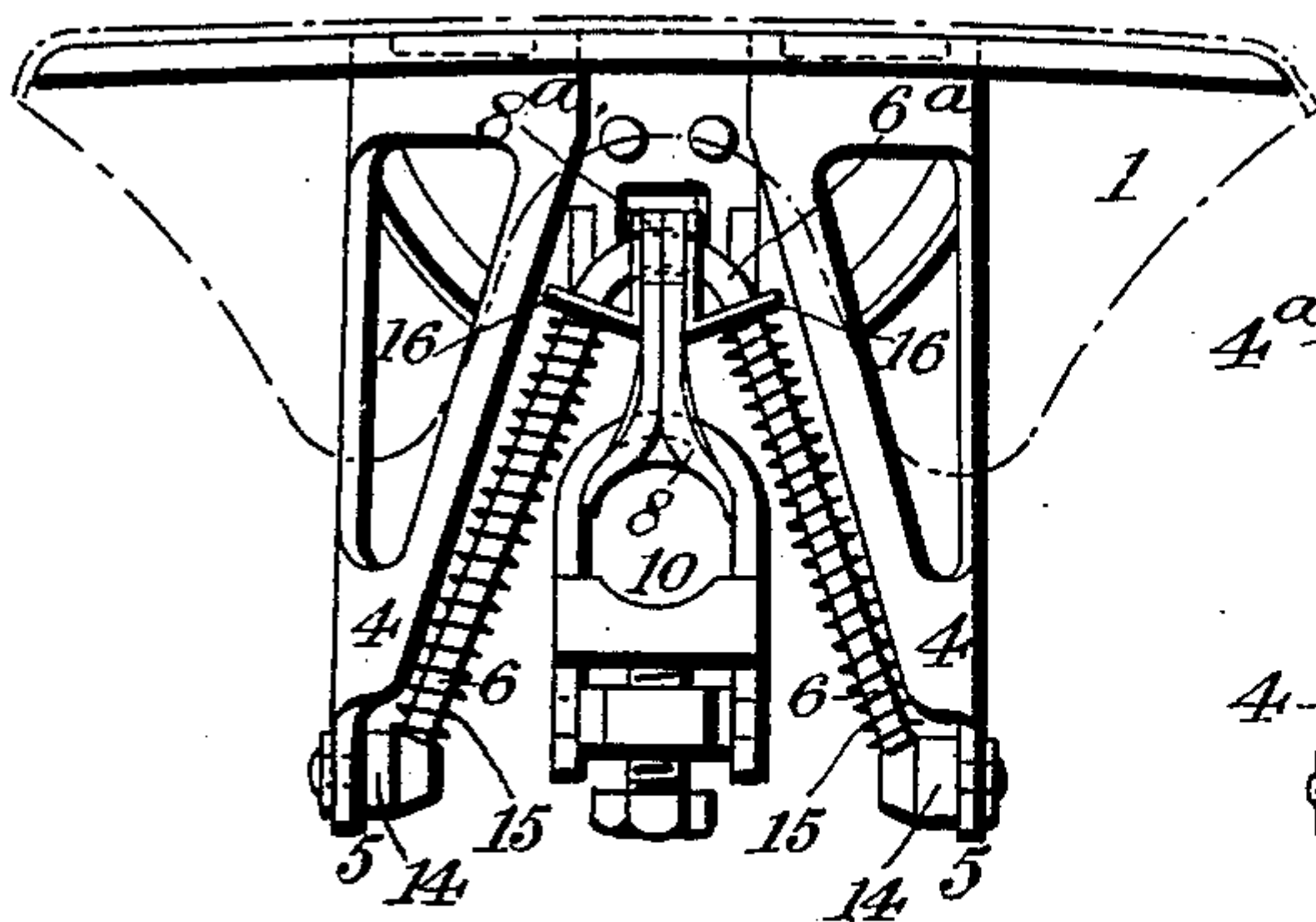
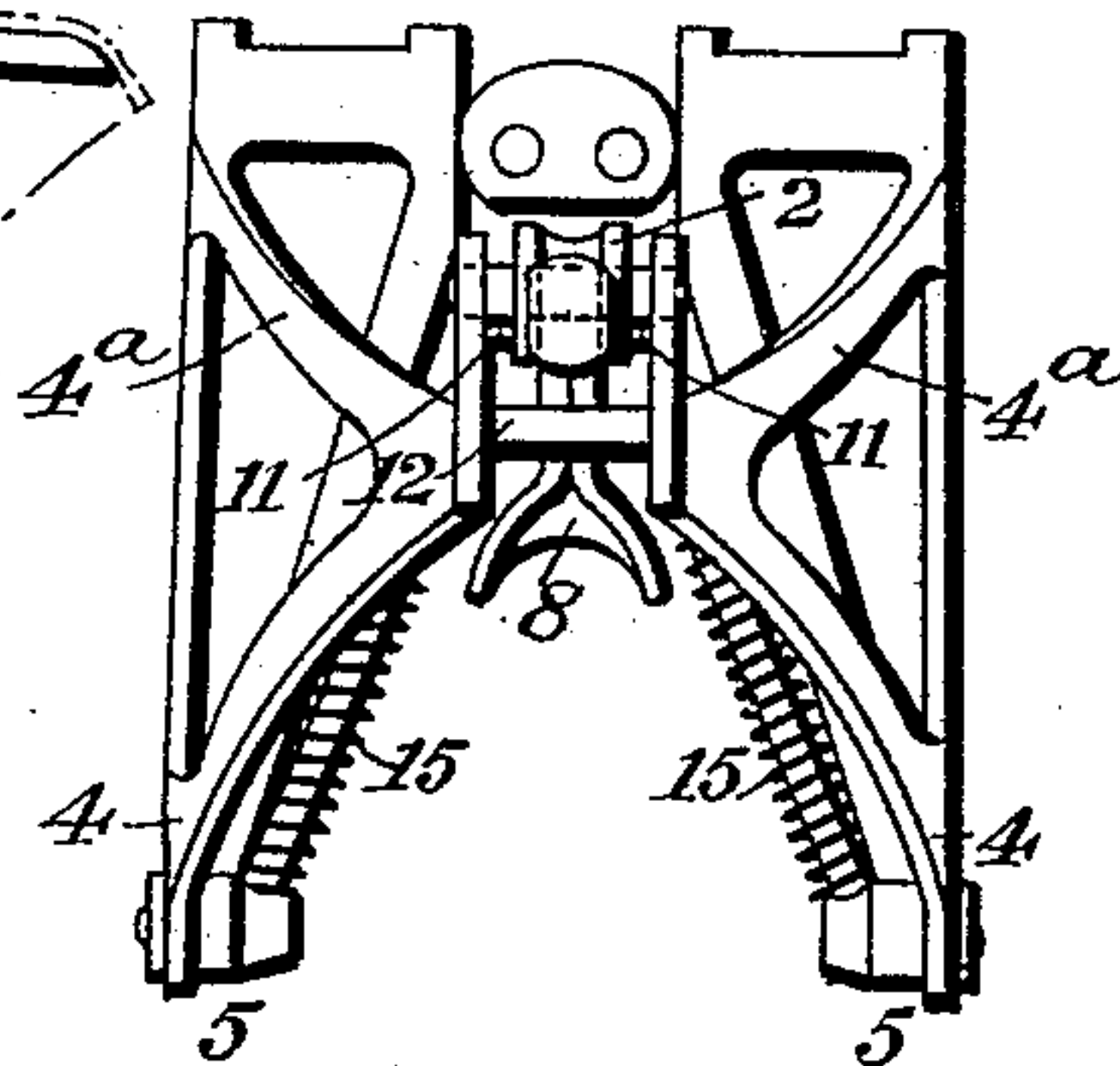


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALEXANDER JOSEPH MORISON, OF LONDON, ENGLAND.

CYCLE-SADDLE AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 630,912, dated August 15, 1899.

Application filed December 27, 1897. Serial No. 663,606. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER JOSEPH MORISON, a subject of the Queen of Great Britain, residing at London, in the county of Middlesex, England, have invented certain new and useful Improvements in Cycle-Saddles and Supports Therefor, (patented in Austria, No. 47/3,487, dated September 20, 1897,) of which the following is a specification.

In order that my invention may be readily understood, I shall proceed to describe it with reference to the accompanying drawings, of which—

Figure 1 is a diagram illustrating the principle of the invention; Fig. 2, a side elevation, partly in section, of a complete saddle made in accordance with my invention; Fig. 3, a front view of the said saddle; Fig. 4, a rear view of the same, and Fig. 5 a detail.

Referring now to Fig. 1, 1 is the leather, (or seat proper,) the front part of which is supported by or attached to the roller 2, which is adapted to run or roll upon the curved rail 3. The rear portion of the saddle is attached to a standing link 4, which is loosely hinged or articulated at its lowest extremity 5 to the hanging link 6, the upper extremity of which is hinged or articulated at the point 7 to the strap 8 or other device, by means of which the saddle is attached to the cycle-frame.

The saddle is shown in its lowest position in dotted lines, and it will be seen that any movement forward or backward will raise the saddle bodily—that is to say, the rear part will rise to an equal extent with the front part of the saddle. Thus I show in full lines on the drawings the position which the saddle occupies when it has moved some distance forward. It will be seen that by means of the link device—that is to say, the combination of hanging and standing links—the rear part of the saddle has been raised, while the fore part of the saddle has been raised to a similar amount by reason of the roller 2 having risen to a higher part of the curved rail 3. This rail should be upwardly concave and preferably curved to such a degree as to cause the front part of the saddle always to be on the same level as the back part. It will be seen that gravity will always tend to keep the saddle in its lowest position.

Having thus described the principle of my

invention, I shall now proceed to describe an actual form thereof, the said form being illustrated in Figs. 2 to 5, inclusive, and giving good results in practice. In the said figures, 9 is the crutch-bar or L-pin, and 10 the clip by means of which the strap 8 of the saddle-support is attached to the said crutch-bar or L-pin. These parts—that is to say, 8, 9, and 10—do not form any part of my invention. They are well known in the art and need not be further described here. It will be seen that the fore part of the strap 8 is so shaped as to constitute the curved rail 3, upon which the roller 2 runs. The said roller is mounted upon a spindle between the two cheeks 11 11. 12 is a pin passing between the said cheeks and is intended to keep the roller 2 from being lifted away from the rail 3.

13 is a stop-piece attached to the end of the curved rail for the purpose of preventing the roller from escaping over the end of the rail on forward movement of the saddle 1. 4 4 are the standing links for supporting the rear end of the saddle. The said standing links in this case instead of consisting of a mere rod, as in Fig. 1, consist of a rigid frame which is continued through the parts 4^a to the front part of the saddle-support. To this frame—that is to say, to the said standing links—are articulated, at the points 5 5, the hanging links 6 6, the said hanging links consisting, in the form illustrated, of a single wire bent into an arch shape. The bend or upper part 6^a of the said arch passes through an orifice 8^a in the strap 8. The hanging links and the standing links are loosely articulated at the points 5 5 by screwing or riveting the lower extremities of the hanging links 6 6 to the blocks 14 14, the said blocks being loosely articulated to the lower extremities of the frame.

In the form which I have illustrated in Figs. 2 to 5 I place around the hanging links helical springs 15 15, the lower ends of which abut against the blocks 14 14, while the upper ends abut against the stops 16 16. These stops 16 consist of plates bent to L shape, as shown, so that while their lower limbs are in contact with the upper ends of the helical springs their upper limbs are in contact with the strap 8. The object of the stop 16 and helical springs 15 is to retain the saddle always in a

horizontal position, for it will be seen that any lateral rocking movement of the saddle will compress one or other of the said springs. Thus, referring to Fig. 4, let us assume that the right-hand side of the saddle is depressed. In that case the right-hand spring will be compressed and will tend to reassert itself by raising the right-hand side of the saddle until the latter is again horizontal. Such rocking of the saddle, or, in other words, alternate depression of the right and left sides of the saddle, takes place with each half-revolution of the pedals, the said rocking being brought about by the action of the rider with the upward-and-downward movement of the legs. Such rocking of the saddle takes place freely, as the arch 6^a is free to rock within the orifice 8^a of the strap 8, while the fore part of the saddle rocks through the free lateral motion of the roller over the rail 3, as is illustrated in Fig. 5. In this figure, which is a section of the parts indicated, the full lines show the relative positions of the rail 3, the roller 2, and the cheeks 11 when the saddle is in its normal or horizontal position, while the dotted lines show the position taken up by the said parts when one side of the saddle has been depressed.

I desire it to be understood that although in the cases illustrated I show the fore part of the saddle as being supported by means of a curved rail and roller and the rear part of the saddle as supported by hanging and standing links it is obvious that the said arrangement is essentially or in principle the support of one end or point of the saddle by links and of another point or end of the saddle by a combination of roller and rail. I have illustrated only the particular form of the invention which I believe most desirable.

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

1. In combination with a seat or saddle a rail and a roller, one of which is secured to the seat or saddle and travels on the other thereby movably supporting one end or part of the seat or saddle, and links supporting another end or part of the seat or saddle, substantially as set forth.

2. In combination with a seat or saddle, a rail and a roller, one of which is secured to the seat or saddle and travels on the other, movably supporting one end or part of the seat or saddle, and hanging links loosely articulated to downward-extending projections supporting another part or end of the seat or saddle, substantially as set forth.

3. In combination as a support for one end or part of a seat or saddle and with some means for movably supporting the seat or saddle at some other point or points, a grooved roller supporting a portion of the seat or saddle and a rail having an upper rounded or convex surface upon which the roller runs, the said grooved roller rocking laterally with the seat or saddle and rolling upon the said convex surface at all positions of its adjustment, substantially as set forth.

4. In combination as a support for one end or portion of a seat or saddle and with some means for movably supporting the seat or saddle at some other point or points, a grooved roller secured to the seat or saddle, and a rail having a rounded or convex surface upon which the roller runs and curving upward from the center of the portion upon which the roller runs, substantially as set forth.

In testimony whereof I have hereunto set my hand, this 10th day of December, 1897, in the presence of the two subscribing witnesses.

ALEXANDER JOSEPH MORISON.

Witnesses:

T. J. OSMAN,
JOSEPH LAKE.