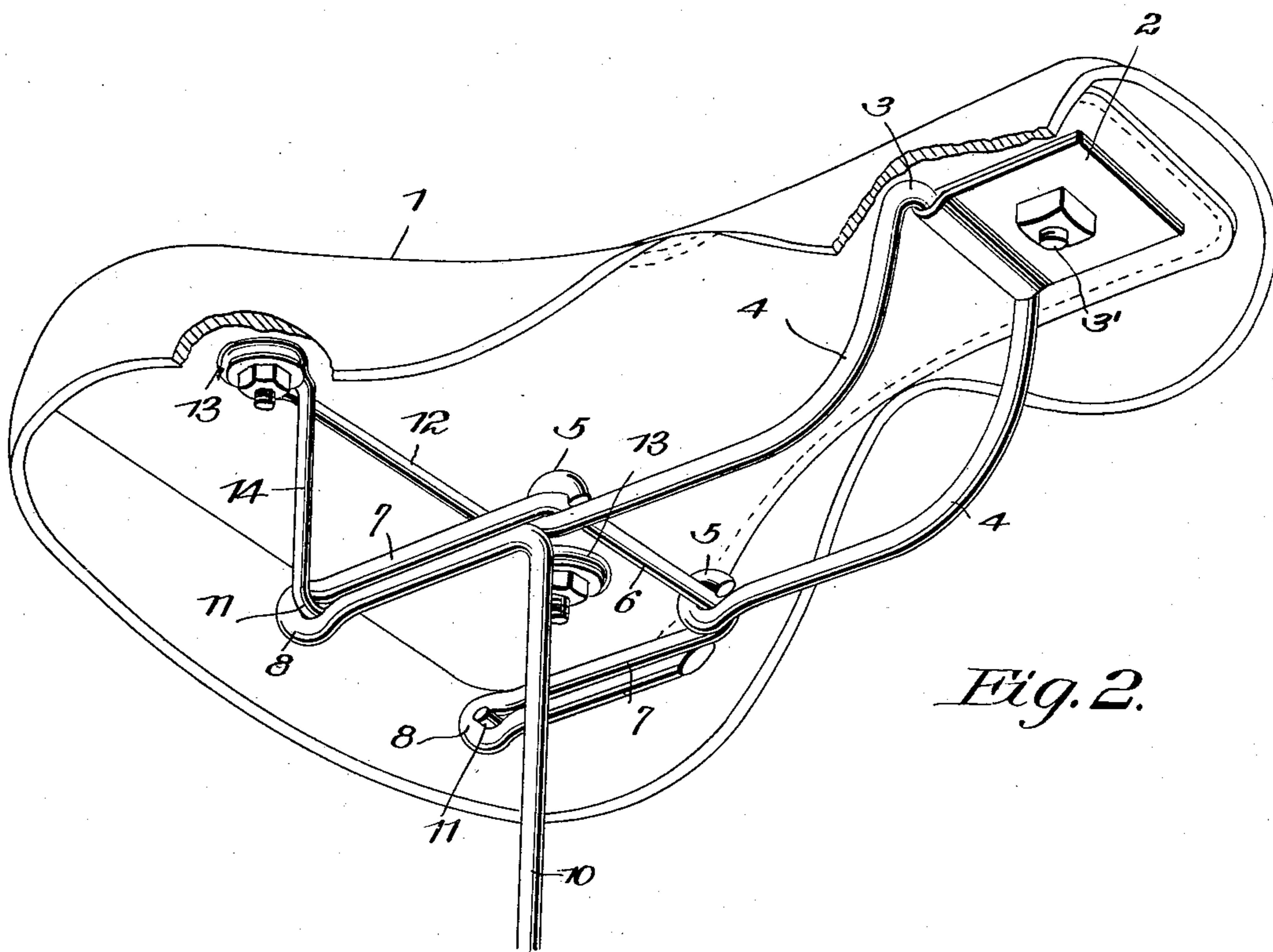
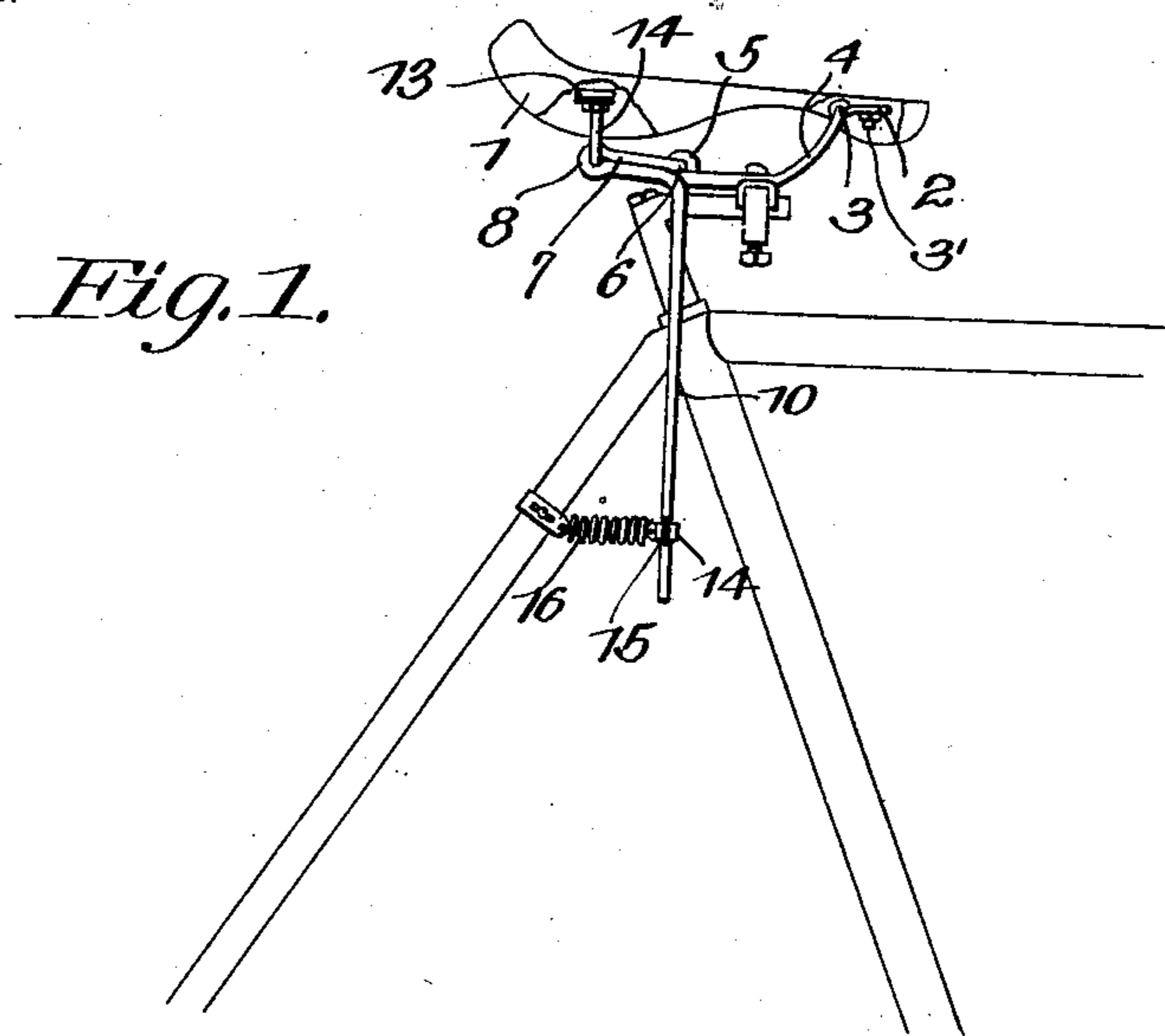


No. 742,479.

PATENTED OCT. 27, 1903.

I. A. NEWWEY.
SPRING SUPPORTED SADDLE.
APPLICATION FILED MAR. 17, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

IRA A. NEWAY, OF ROME, NEW YORK.

SPRING-SUPPORTED SADDLE.

SPECIFICATION forming part of Letters Patent No. 742,479, dated October 27, 1903.

Application filed March 17, 1903. Serial No. 148,212. (No model.)

To all whom it may concern:

Be it known that I, IRA A. NEWAY, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have
 5 invented a new and useful Spring-Supported Saddle, of which the following is a specification.

My invention relates to spring-supported seats or saddles adapted primarily for use
 10 on bicycles, but susceptible of use also with mowers, harvesters, wheel-plows, and other agricultural implements in which the driver rides upon the implement.

The object of the invention is to provide a
 15 simple, readily-adjusted, and durable seat for use on bicycles and implements, as above specified, which shall do away in a great measure with the jar produced by riding over stones or other obstructions.

20 In the accompanying drawings, forming a part of this specification, is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being of course understood that I do not
 25 wish to be limited to the exact form and proportions or mode of assemblage of the elements therein shown, but reserve the right to make such changes therein as do not depart from the spirit of the invention and lie
 30 within the scope of the claims.

Figure 1 is a view in side elevation of a portion of a bicycle-frame with my improved saddle mounted thereon. Fig. 2 is a view in perspective looking upward of the saddle and
 35 most of the supporting structure.

In the above-mentioned figures corresponding parts are indicated by the same characters of reference throughout.

Referring to the drawings by reference
 40 characters, 1 designates the seat portion of a bicycle-saddle constructed in accordance with my invention, which may be of any preferred form, that illustrated being one adapted to give effective support to the ischial
 45 bones and relieve the perineum of pressure which might be harmful. On the under surface thereof the seat portion 1 is provided with a metallic strap 2, bent upon itself to form a loop in which is held, so that it may
 50 rotate therein, a transverse portion 3 of the forward member of the supporting structure for the seat. The strap 2 is secured to the seat

portion 1 by a bolt 3', which passes through slots provided in the two end portions of the strap, as shown. The forward section of the
 55 supporting structure is formed, preferably, of an iron rod of about one-fourth of an inch in diameter being bent to the form shown and comprising a transverse portion 3, which is
 60 journaled in the loop formed in the strap 2, and the two downwardly-curving and longitudinally-extending portions 4 4, each of which has at its rearward extremity an eye
 5, formed by bending the end of the rod upon
 65 itself.

Journaled in the eyes 5 of the forward section of the supporting structure is a transverse portion 6 of the main section of the supporting structure. The main section of the
 70 supporting structure comprises the transverse portion 6 already mentioned, two rearwardly-extending arms 7 7, each of which has at its rearward end an eye 8, formed by bending the rod of which the main supporting-
 75 section is formed upon itself, as shown, and a downwardly-extending arm 10, integral with one of the arms 7 and disposed substantially at right angles thereto.

Engaging the eyes 8 of the main supporting-section are the terminals 11 of the rear
 80 section of the supporting structure, said section comprising a transverse portion 12, provided with eyes 13, formed at the ends thereof, and downwardly-extending portions 14,
 85 which terminate in the ends 11, which engage the eyes 8 in the main supporting-section, as already specified.

Adjustably connected with the downwardly-disposed arm 10 of the main section, as by means of a collar 14 and a set-screw 15, is a
 90 spiral spring 16, the other end of which is adapted to be attached to the rear fork of a bicycle-frame, as shown, or to some suitable portion of an agricultural implement when
 95 the saddle is used thereon. Any convenient means of attachment may be employed to fasten the spring 16 to the fork of the bicycle, and it should preferably be readily adjustable to position thereon, as is the screw-clamp
 100 shown in the drawings.

In use on a bicycle the seat is firmly attached to the seat-post of the bicycle by means of the usual form of clamp, as shown in the drawings, which engages the two longitudi-

nally-disposed arms 4 4. The collar 14, to which is attached one end of the spring 16, is adjusted in position on the arm 10 according to the weight of the rider of the bicycle, being placed near the lower end if the rider be heavy and near the upper end if the rider be of lighter weight, and the other end of the spring 16 is connected with the frame at a point such that the arm 10 will be held when the saddle is unoccupied in a substantially vertical position.

The operation of the device is obvious. When weight is applied to the saddle attached to a bicycle in the manner above described, the rear portion of the saddle will be depressed, bearing down upon the rearward ends of the arms of the main supporting-section, which will be depressed, and the main supporting-section will turn upon its transverse portion 6 as a pivot. The downwardly-extending arm 10 will be thrown forward against the tension of the spring 16 until the tension of the spring counterbalances the weight of the rider. As the pressure exerted upon the saddle by the rider varies in riding the saddle will rise and descend in response to the action of the spring 16, and when the bicycle passes over rough road-beds the jars which would otherwise be transmitted directly to the seat portion of the saddle are largely taken up by the spring, thus relieving the rider of much fatigue and preventing the injury that sometimes results from riding upon unyielding saddles over rough roads.

It will be seen that while the device as shown and described is extremely simple in construction and contains but few parts it may be readily adapted for use by riders of widely-different weights and will effectively prevent the transmission of jars to the rider. It will also be observed that the device is one which may be readily manufactured without costly machinery and which will be exceedingly durable in service. The only part of the entire structure which is apt to lose its utility from continued use is the spring 16, which may be readily replaced at small cost.

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

1. The combination with the seat portion of a saddle for bicycles and other vehicles of a supporting structure comprising a forward section pivotally connected with said seat portion, a main section pivotally connected with said forward section and having a lever-arm,

a rear section rigidly attached to said seat portion and connected with said main section, and a spring connected at one end with said lever-arm and at the other end with the frame of the vehicle.

2. The combination with the seat portion of a bicycle-saddle of a supporting structure comprising a forward section pivotally connected with said seat portion, a main section pivotally connected with said forward section and having a downwardly-disposed lever-arm, a rear section rigidly attached to said seat portion and pivotally connected with said main section, and a spring having one end adjustably attached to said lever-arm and its other end attached to the frame of the vehicle.

3. The combination with the seat portion of a saddle for bicycles and other vehicles of a supporting structure comprising a forward section pivotally connected with said seat portion, a main section pivotally connected with said forward section and having a lever-arm disposed substantially at right angles to the arms of said section, a rear section rigidly secured to said seat portion and pivotally connected with said main section, and a spring adjustably attached to said lever at one end and at the other end to the frame of the vehicle.

4. The combination with the seat portion of a saddle for bicycles and other vehicles of a supporting structure comprising a forward section pivotally connected with said seat portion and having a transverse portion and downwardly and rearwardly curved longitudinal arms terminating in eyes, a main section consisting of a transverse portion journaled in the eyes of the forward section and rearwardly-extending arms terminating in eyes, a lever-arm integral with one of said rearwardly-extending portions of said main section, a rear section rigidly attached to said seat portion of the saddle and having pivotal engagement with the eyes of said main supporting-section, a spiral spring having one end adjustably attached to the said lever-arm and the other end attached to the frame of the bicycle or other vehicle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

IRA A. NEWHEY.

Witnesses:

F. S. SMITH,
G. M. PALMER.