No. 886,227.

PATENTED APR. 28, 1908.

J. F. MAMET & P. HALLOT.

SADDLE SUPPORT FOR CYCLES.

APPLICATION FILED JUNE 20, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

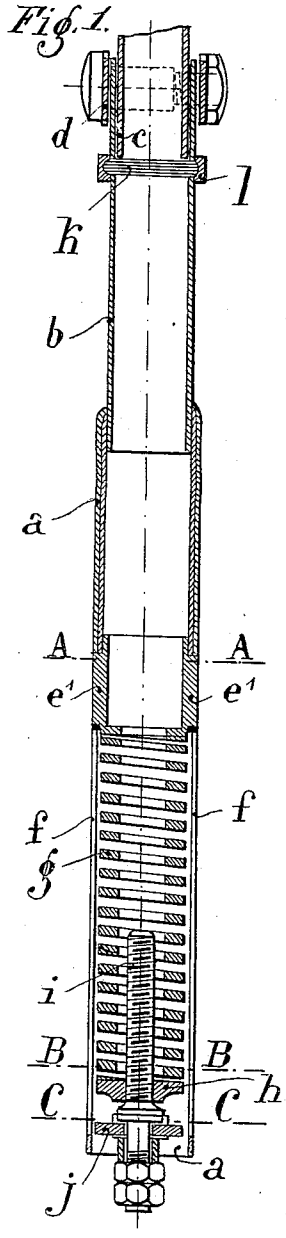



Fig. 2.

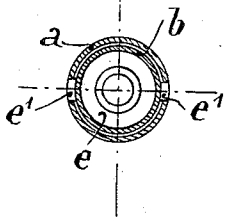



Fig. 3.

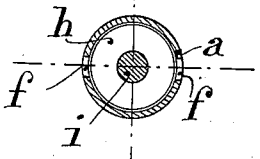



Fig. 4.

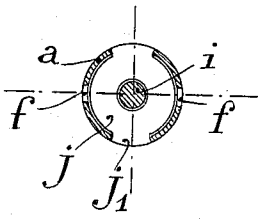
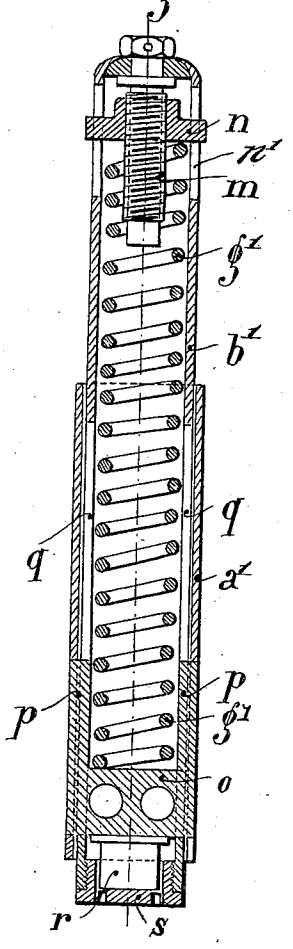



Fig. 5.




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2 SHEETS—SHEET 2.

Fig. 6.

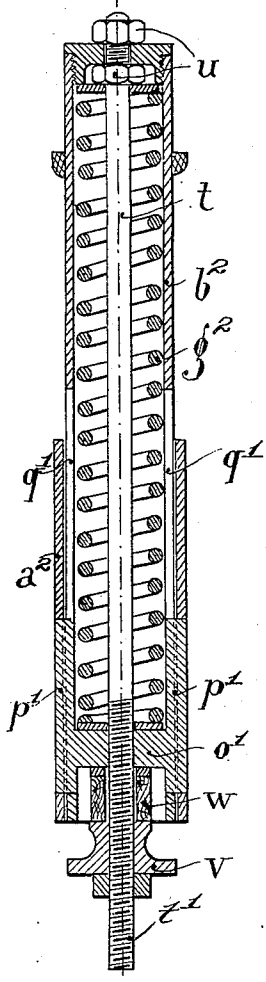



Fig. 7.

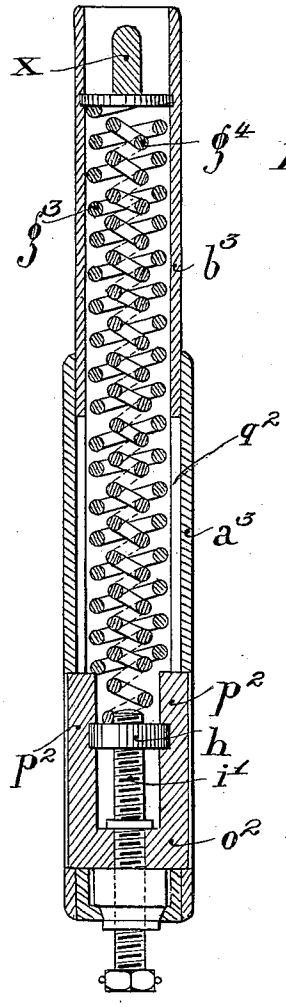
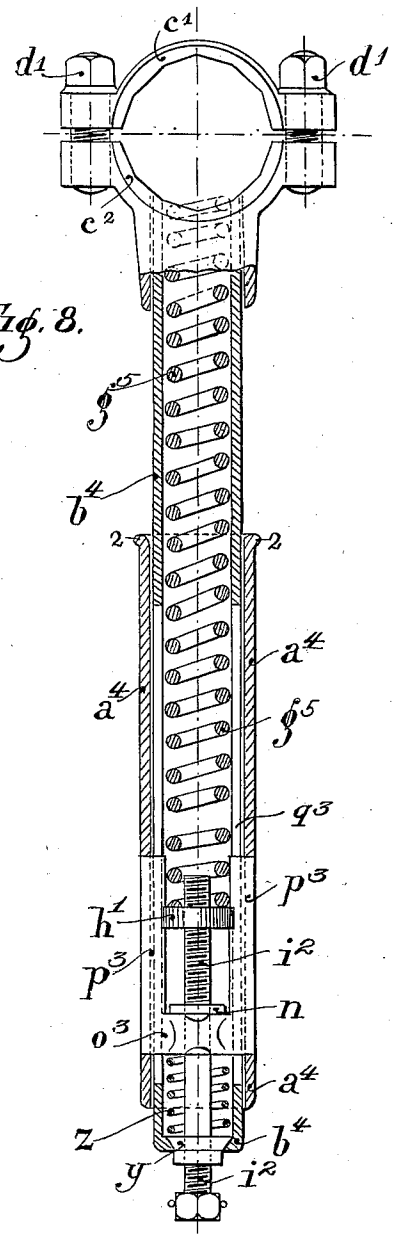



Fig. 8.




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# UNITED STATES PATENT OFFICE.

JULIEN FRANÇOIS MAMET, OF BILLANCOURT, AND PAUL HALLOT, OF VINCENNES, FRANCE.

## SADDLE-SUPPORT FOR CYCLES.

No. 886,227. Specification of Letters Patent. Patented April 28, 1908.

Application filed June 20, 1905. Serial No. 266,190.

*To all whom it may concern:*

Be it known that we, JULIEN FRANÇOIS MAMET and PAUL HALLOT, citizens of the French Republic, residing the first at Billancourt, Seine, 106 Route de Versailles, the second at Vincennes, 79 Rue de Fontenay, France, have invented certain new and useful Improvements in Saddle-Supports for Cycles, of which the following is a specification.

The invention relates to spring supports for saddles and the handle bars of bicycles, consisting of two concentric tubes.

The object of the present invention differs from such known devices by the arrangement that the support forms an independent device which can be made independently from the bicycle, and which can be mounted on any machine.

The characteristic feature of the invention is the tensioning device in the outer tubes.

In the annexed drawings the improved spring support for the saddle and handle bar of bicycles is shown in various modifications.

In the drawings—Figure 1 is a longitudinal section of my invention; Figs. 2, 3 and 4 are sections on the lines A—A, B—B, C—C, respectively, of Fig. 1; Figs. 5, 6, 7 and 8 show modifications of the invention, the same being in section.

In all the figures the same letters of reference indicate the same parts.

In the drawings *a* designates the tube in which is fitted another tube *b* for receiving the stem or stalk *c* for supporting a saddle, not shown, and which is fixed therein by a screw clamp or collar *d*. Tube *b* is made in two sections and tube *a* is cut off just below the lugs *e'*. The lower part of the tube *b* carries a hollow sliding key or buffer *e* having lugs or projections *e'* fitting in corresponding slots *f* formed in the tube *a*. On the sliding key or buffer *e* bears one of the extremities of a spring *g*, while the other extremity of this spring bears on a nut *h* traversed by a regulating screw *i* movable in a socket *j* kept fixed in the tube *a* by two projections *j'*, engaging in corresponding gaps formed in the tube *a*. A pin *k* extending through the movable tube *b* limits the downward movement of the latter and all sharp shocks or jars are avoided by a ring or washer *l* of india rubber. The regulation of the tension of the spring is effected by the shifting of the nut *h* consequent on turning the screw *i*.

The device shown in Fig. 5 of the drawing comprises a pair of telescopic tubular sections *a'* and *b'*, the upper section *b'* being provided with longitudinally extending slots *q*. In the upper end of the tube section *b'* is mounted a regulating screw *m* having a nut *n* provided with portions that are guided in longitudinal slots *n'* in the tube section *b'*. The spring *g'* is preferably of the same diameter throughout its length, and one end of the spring bears against the nut *n*, the opposite end of the spring resting upon a key *o* which is in substantially the form of a horse-shoe having a pair of legs *p* which rest in recesses in the walls of the tube *a'* so as to prevent relative rotation or longitudinal movement relatively to the section *a'*, and these legs also operate in the longitudinal slots *q* formed in the upper section *b'*, the key thereby preventing relative rotation of the two sections but permitting a limited longitudinal movement thereof. An elastic ring or washer *r* is preferably placed below the key *o*, this washer resting upon a screw or similar device *s* which is threaded or otherwise secured in the bottom of the slidable tube section *b'*.

In that form of the invention shown in Fig. 6, a pair of telescopic tube sections $a^2$ and $b^2$ is used, the tube section $b^2$ being provided with longitudinally extending slots *q'* in which the legs *p'* of the key *o'* operate so as to permit relative longitudinal movements of the section although relative rotary movement is prevented, this feature of the construction being similar to that shown in Fig. 5. In this instance, however, the relative longitudinal movements of the sections are more limited and a stronger initial tension is given the check spring $g^2$, the upper tube section $b^2$ being provided with a bolt *t* having its upper end rigidly attached to the tube section $b^2$ by means of nuts *u* and its lower end is threaded to form a screw *t'*, the latter extending loosely through the center of the key *o'*. In this instance the screw moves longitudinally through the key during the telescopic movements of the sections, and the tension or strength of the spring is adjusted by means of a nut *v* which is adjustable longitudinally on the screw. In order to ease the shock between the sections when the latter are extended, it is generally preferable to interpose a buffer in the form of a washer of fiber or other material *w* between the upper side of the nut *v* and the under side of the key *o'*. Obviously by screwing the nut *v* upwardly on the screw, the tension of the spring $g^2$ is in-

creased and a reverse movement of the nut will correspondingly lessen the strength of the spring.

In that form of the invention shown in Fig. 7, a pair of telescopic tubular sections $a^3$ and $b^3$ are used similar to those shown in Fig. 6, the upper section $b^3$ being provided with longitudinal slots $q^2$ in which the legs $p^2$ of the key $o^2$ slide, this key being fitted into recesses in the upper section $a^3$ so as to prevent relative longitudinal movement between the key and the section $a^3$. In this instance, however, a pair of springs $g^3$ and $g^4$ are used, the spring $g^4$ being of smaller diameter and fitting within the spring $g^3$, the upper end of both springs bearing against an abutment or key $x$ arranged within the upper tube section $b^3$ and the lower end of this inner spring rests upon a nut $h$, the latter being guided to operate vertically between the legs $p^2$ of the key and this nut is operated or adjusted by means of a screw $i'$ which is carried by the key. In this instance both springs cooperate to resist the telescoping movement of the sections and by making these springs of highly resilient wire, a greater elasticity is obtainable.

Fig. 8 illustrates another form of the invention applied to a handle bar or steering post. In this instance the device comprises upper and lower tube sections $a^4$ and $b^4$, the latter section being slotted longitudinally as at $q^3$ so as to have a sliding engagement with the legs $p^3$ of a key $o^3$, the latter being held from longitudinal movement relatively to the lower section $a^4$. In this instance also the key carries a screw $i^2$ having its upper end threaded in a nut $h'$ which is guided to operate vertically between the legs $p^3$ of the key and is held from rotation relatively thereto. The movements of the sections under the action of the spring $g^5$ are cushioned by a spring $z$ which operates as a buffer similar to the washer $w$ as shown in Fig. 6, this buffer spring resting upon a nut $y$ having a conical periphery which coöperates with a corresponding seat formed in the lower end of the tube section $b^4$, the upper end of this buffer spring being arranged to engage the under side of the key $o^3$ when the tube $b^4$ reaches the limit of its upward movement. In this instance the buffer spring $z$ offers a more yielding resistance than the fiber or elastic washer $w$ as shown in Fig. 6. The upper end of the tube section $b^4$ is provided in the present instance with a segmental member $c^2$ and a relatively movable segmental section $c'$, these sections forming a socket between which the handle bar is clamped. In the present instance the necessary clamping action between the segmental sections is obtained by means of the clamping screws $d'$. The tube section $b^4$ in this instance has an opening leading to the under side of the handle bar, so that the spring $g^5$ bears upon the handle bar when the latter is in position. In order to prevent the outer tube section $a^4$ from slipping into the tubular socket of the bicycle frame, the upper edge of this section is provided with a circumferential rim or lip 2 which forms a flange or enlargement.

It will be readily understood that the forms and dimensions and likewise the materials employed in the construction of the above described apparatus may be varied without in any way changing the nature of the invention.

What is claimed is:—

1. A device of the class described comprising telescopic tubular sections, the outer section being adapted to fit into a socket of a bicycle frame, a key movable longitudinally of one of said sections and held from longitudinal movement relatively to the other section, a compression spring having its ends arranged to act respectively upon said key and said section which is longitudinally movable relatively to said key, and means coöperating with one end of said spring for adjusting the tension thereof.

2. A device of the class described comprising telescopic tubular sections, the outer section being adapted to fit into a socket of a bicycle frame, one of said sections being provided with longitudinally extending slots, a key having portions guided to slide in the slots of the said section and held from longitudinal movement relatively to the other section, and a spring having one end bearing against said key and having its opposite end arranged to act upon the section provided with the longitudinal slots.

3. A spring support for a saddle and handle bars of bicycles, consisting of two concentric tubes inclosing a spring, a key of horse-shoe shape in the lower end of the outer tube and having an adjustable nut for serving as a tensioning device for the spring, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JULIEN FRANÇOIS MAMET.
PAUL HALLOT.

Witnesses:
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ALFRED FREY.