A. H. CULLEY.

SPRING FORK FOR VELOCIPEDES.

APPLICATION FILED AUG. 1, 1916.

1,206,210. Patented Nov. 28, 1916.

Fig. 1.

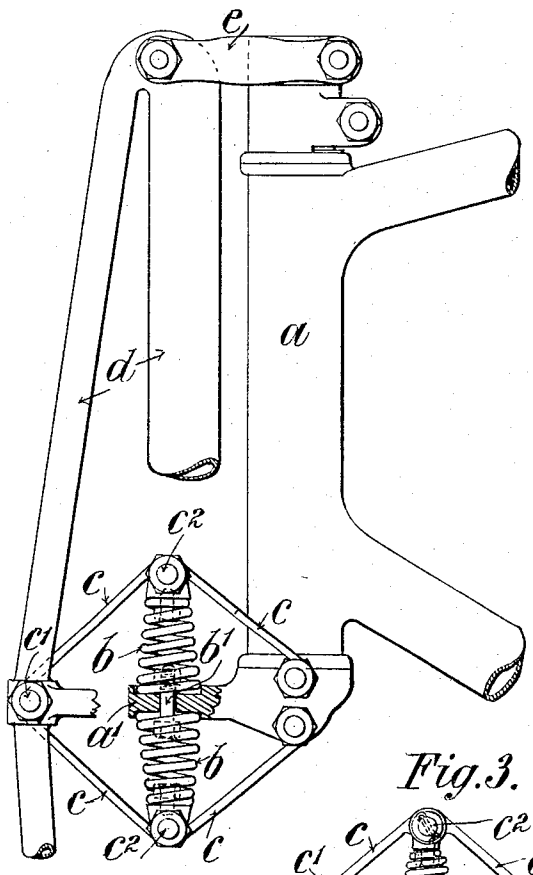


Fig. 2.

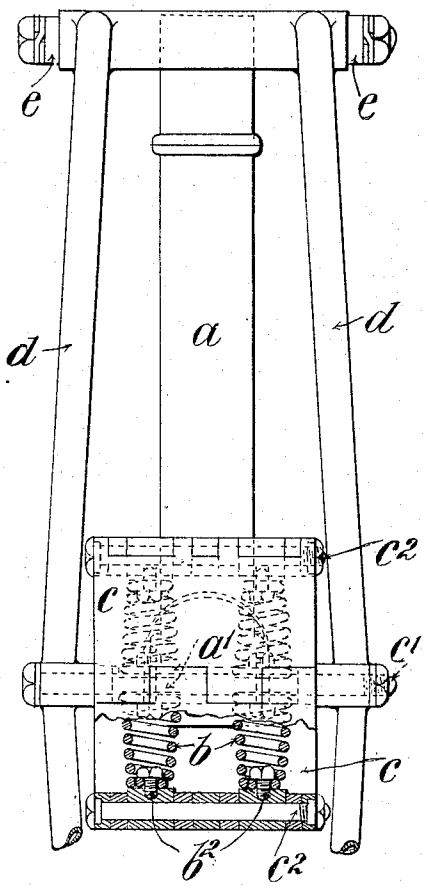
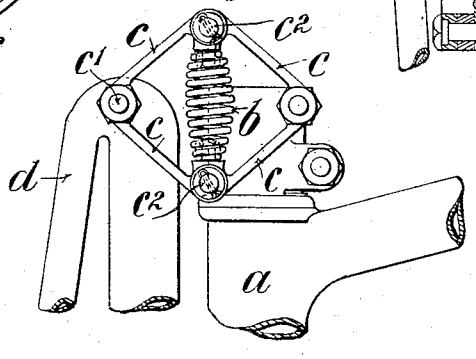


Fig. 3.



INVENTOR.

Alfred Henry Culley.

Per *Robert B. Phillips*

his Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALFRED HENRY CULLEY, OF ERDINGTON, BIRMINGHAM, ENGLAND, ASSIGNOR OF ONE-HALF TO SAMUEL DAVIES, OF LONDON, ENGLAND.

SPRING-FORK FOR VELOCIPEDES.

1,206,210. Specification of Letters Patent. Patented Nov. 28, 1916.

Application filed August 1, 1916. Serial No. 112,585.

To all whom it may concern:

Be it known that I, ALFRED HENRY CULLEY, a subject of the King of Great Britain and Ireland, residing at 68 Frances road, Erdington, Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in and Relating to Spring Forks for Velocipedes, of which the following is a specification.

This invention relates to improvements in spring forks for velocipedes—particularly to spring steering forks for motor cycles—and has for its object the general improvement and efficiency of such devices.

The present invention comprises essentially a pair of single links or levers and a double hinge link or a pair of double hinge links connecting the steering column with the usual girder fork and a spring or springs interposed between the upper and lower hinging points of each double hinge link so as to control the relative movement between the head and the fork the arrangement of the parts being such that the road wheel on meeting an obstacle causes the fork to move in a horizontal plane and upwardly in a vertical plane.

In the accompanying drawing, Figure 1 is a broken view in side elevation—partly in section—of a spring fork constructed according to the present invention, Fig. 2 is a similar view in front elevation thereof, and Fig. 3 is a part view in side elevation of a modification.

Throughout the views similar parts are marked with like letters of reference.

Referring to Figs. 1 and 2, the steering column in the head a has secured or formed thereon a forwardly extending plate or lug a^1 adapted to form a bearing for two pairs of helical compression springs b, one pair above said plate or lug and one pair below it. These springs b are securely fastened to said plate or lug, preferably by bolts b^1. Pivoted to said steering column in about the central transverse plane thereof and above and below said plate or lug are a pair of centrally hinged links or plates c the forward or free ends of which are pivoted at c^1 to the front member of the members d of the girder fork. The free ends of the springs b are attached—preferably by bolts b^2—to the centers or hinging points c^2 of said plates so that as the fork is raised in a vertical plane on the wheel meeting an obstacle on the road it also moves forwardly or outwardly in a horizontal plane by the springs becoming compressed and the center or hinging points of the plates approaching one another and so increasing the distance between their pivoting points on the steering column and the girder fork members.

The top of the fork is hinged to the steering head clip by the usual links or side plates e.

In some cases, in place of the four springs b as shown (two on each side of the abutment or lug a^1) only two springs may be employed, in which case the plate or lug a^1 will project into or about the center coils of the springs which will then be shaped or arranged to allow of such construction.

In the modification illustrated in Fig. 3 of the drawing the usual links or hinged side plates connecting the top of the fork d with the steering head clip in existing spring forks are each replaced by a pair of centrally hinged links or plates c with an interposed tension spring b, as shown, in which case the lower end of the steering column is hinged to the fork by the usual links or side plates.

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

1. In a spring fork for velocipedes, a pair of single links and a double hinge link connecting the steering column with the fork and springs interposed between the upper and lower hinging points of the double hinge link, as set forth.

2. In a spring fork for velocipedes, a pair of single links connecting the upper end of the steering column with the upper end of the fork, a double hinge link connecting the lower end of the steering column with the fork, a forwardly extending plate on the lower end of the steering column, two pairs of helical compression springs each taking a bearing at one of their ends on said plate one pair of said springs above it and the other pair below it, and the free ends of said springs being attached to the upper and lower hinging points of the double hinge link, as set forth.

3. In a spring fork for velocipedes, a pair of single links and a pair of double hinge links connecting the steering column with the fork, and a tension spring inter-

posed between the upper and lower hinging points of each double hinge link, as set forth.

4. In a spring fork for velocipedes, a pair of double hinge links conecting the upper end of the steering column with the upper end of the fork, a tension spring attached to the upper and lower hinging points of each double hinge link, and a pair of single links connecting the lower end of the steering column with the fork, as set forth.

In testimony whereof I have signed my name.

ALFRED HENRY CULLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D C."