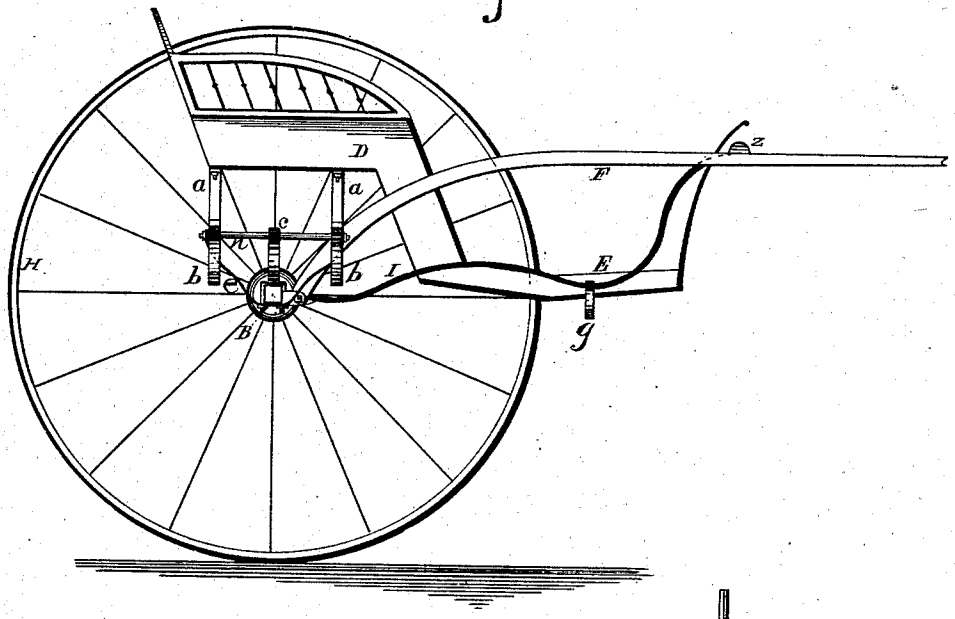
(No Model.)

T. BOETTCHER.

SULKY.

No. 274,167. Patented Mar. 20, 1883.

Fig. 1.



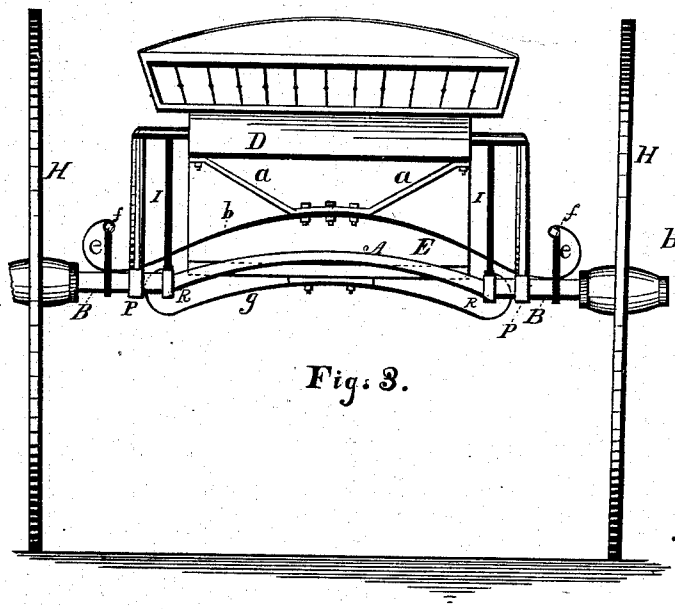


Fig. 3.

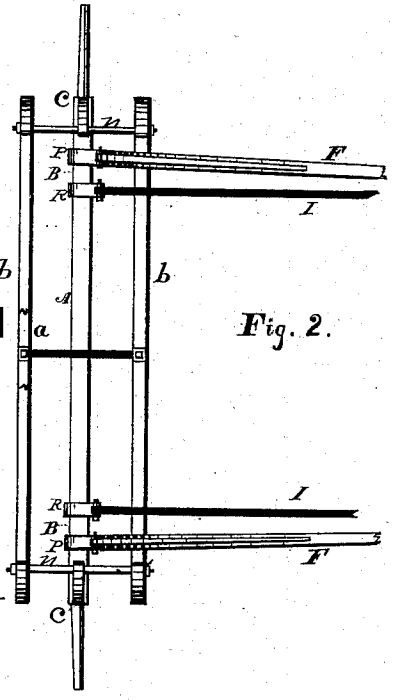


Fig. 2.

Witnesses.
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Inventor.
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By G. L. Chapin, Atty.

UNITED STATES PATENT OFFICE.

THEODOR BOETTCHER, OF MENDOTA, ILLINOIS.

SULKY.

SPECIFICATION forming part of Letters Patent No. 274,167, dated March 20, 1883.

Application filed November 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, THEODOR BOETTCHER, of Mendota, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Sulkies, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure 1 is a side elevation of a sulky embodying my invention; Fig. 2, a rear elevation of the same; Fig. 3, a plan or top view of a portion of the gearing removed from the other parts of the sulky to give a clearer view of its construction.

The object of the present invention is so to construct a two-wheeled vehicle that the oscillating motion of the thills will not be communicated to the box or body thereof, and at the same time provide a neat, strong, and easy sulky.

The nature of the present invention consists in upwardly-curved spring-hangers attached to the axle-tree and made to support the ends of the long springs which support the body, and, in combination therewith, of a curved spring-bearer attached to the supporting-rods to each hanger and made to bear on the axle-tree, so as to give a strong support to the long springs with the least possible metal, but not to serve as spring. This construction is in contradistinction to what is known as the "platform-springs," which consist of springs placed parallel to and transversely with the axle-tree. As per a practical test, I find my device gives a much less side motion, which is an objectionable feature of the platform-springs in two-wheeled vehicles; further, in securing the spring-braces (which support the forward portion of the body) to the axle-tree in the same manner as the shafts are attached, whereby the spring of the spring-braces will not convey motion to the body, as hereinafter fully shown and described.

A B B represent the axle-tree, H H the wheels, F F the thills, and D E the body, of the sulky, all of which have the ordinary construction of sulkies, except that the thills are attached to the axle-tree by jointed clips P P, similar to the attachments for buggy-thills. The thills therefore, being jointed, can by their oscillating movement communicate no such movement to the axle-tree A B B. Now, to support the body D E, spring-braces I I are also jointed to the axle-tree by clips, (shown at R R,) and their forward ends rigidly secured to the cross-bar *z* of the thills. The strength or stiffness of the spring-braces must depend on the load which the sulky is to carry. For carrying two persons, or three hundred pounds or more weight, three-fourth-inch steel rods will be found to answer the purpose well. Where the braces I I are too stiff, the connection will be too rigid to insure the greatest ease to the occupants in the body. The foot portion E of the body is supported by a spring, *g*, whose ends are hung to the spring-braces I I, as shown at Figs. 1 and 2, so that the motion of the thills is not communicated to the body, except in the line of a direct forward movement.

The means for supporting the ends of the rear springs consist of curved hangers *e e*, which at their bottom portion are rigidly fastened to the straight portions of the axle-tree by clips, or by any other suitable means. The top ends of these hangers have holes formed in them transversely to the axle-tree, and through the holes are placed rods *n n*, to support the eye ends *f f* of the springs *b* and the eye ends of curved supports *c*. The lower ends of these supports bear on the axle-tree, and are fastened thereto by clips or screw-bolts, so that when the hangers *e e*, rods *n n*, and supports *c c* are constructed as shown and adjusted relatively the springs *d d* have strong and easy bearings, which enables their flexibility to be utilized to the best advantage, and at the cost of the lighter amount of metal. The rods *n n* may have heads at one end and be fastened by nuts at the other.

It is well to state that this invention has been reduced to practice, and the sulky so made is found to warrant the advantages herein claimed to the fullest extent.

In the foregoing a considerable portion of the sulky has been described, that the construction and advantages of the improvements might be comprehended.

I claim as new and desire to secure by Letters Patent—

1. In two-wheeled vehicles, the spring-hangers *e e*, attached to and projected above the ends of the axle-tree, in combination with the horizontal rods *n n*, for the support of the ends

of the springs *b*, and the curved supports *c c*, for holding the hangers in fixed upright positions, as and for the purpose specified.

2. In springs for two-wheeled vehicles, the spring-hangers *e e*, projecting above the axle-tree, horizontal rods *n n*, put through the hangers, and curved supports *c c*, and long springs placed parallel with the curved supports *c c* and at right angles to the rods *n n*, for the spring-support of the rear portion of the body, in combination with the spring-braces I, jointed to the axle-tree, and the spring *g*, placed transversely to the spring-braces I and attached to the forward part of the body for its spring-support, as and for the purpose specified.

THEODOR BOETTCHER.

Witnesses:
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SILAS HUBBARD.