(No Model.)

S. P. SOUTHARD.

TWO WHEELED VEHICLE.

No. 306,359. Patented Oct. 7, 1884.

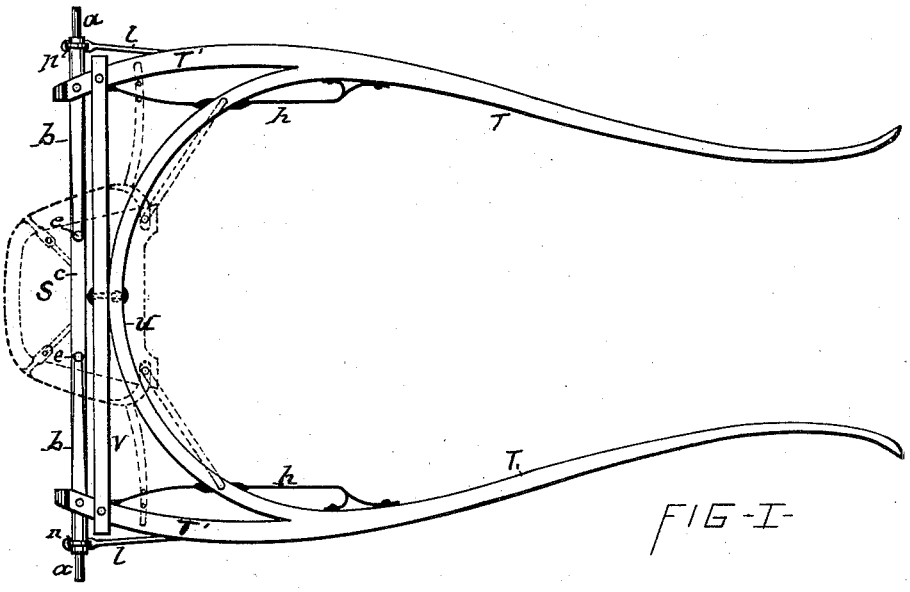

FIG-I-

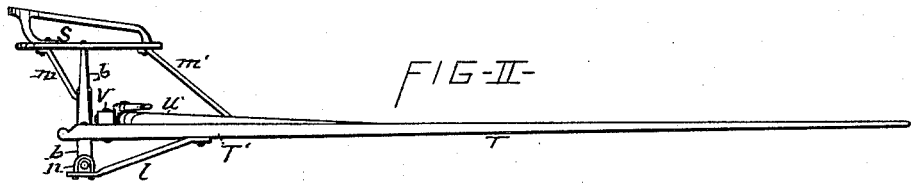

FIG-II-

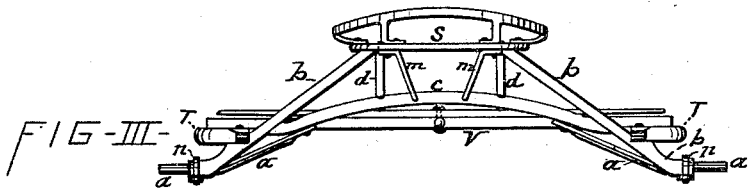

FIG-III-

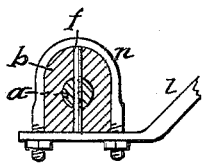

FIG-V-

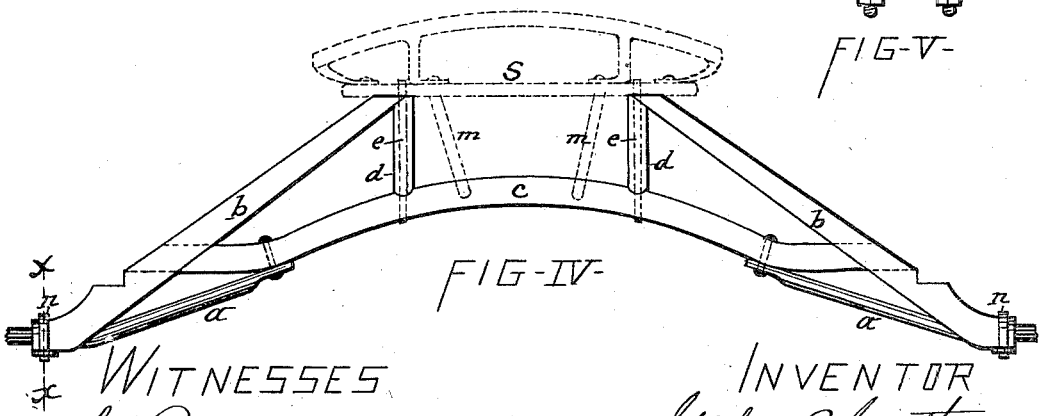

FIG-IV-

WITNESSES

C. Bendixson

Wm. L. Ragsdale

INVENTOR

Stephen P. Southard

per Smith Lemon & Hoag Attys

UNITED STATES PATENT OFFICE.

STEPHEN P. SOUTHARD, OF GENEVA, ASSIGNOR OF ONE-HALF TO CLARENCE C. POST, OF ITHACA, NEW YORK.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 306,359, dated October 7, 1884.

Application filed June 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN P. SOUTHARD, of Geneva, in the county of Ontario, in the State of New York, have invented new and useful Improvements in Sulkies, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists in a novel construction of a sulky-frame in which are combined superior stability with simplicity and greatly-reduced weight, as hereinafter more fully described, and specifically set forth in the claims.

The invention is fully illustrated in the annexed drawings, wherein Figure I is a plan view of my improved sulky-frame with the whiffletree removed. Figs. II and III are respectively a side view and a rear end view of my invention. Fig. IV is an enlarged elevation of the truss which supports the seat, and has affixed to it the axles; and Fig. V is an enlarged transverse section on line *x x*, Fig. IV.

Similar letters of reference indicate corresponding parts.

S denotes the seat of the sulky, which seat is supported on and forms the top chord of a truss, whose other component members consist of two oblique braces extended from the seat to the wheel-hubs; a bar or cross-tie, *c*, connecting the two braces near their lower ends, and constituting the lower chord of the truss; vertical posts *d d*, interposed between the cross-tie *c* and upper end of the braces *b b*, and fitted to said parts so as to obtain a firm bearing thereon, and rods *e e*, extended through the seat and through the upper end of the braces, and thence longitudinally through the posts *d d* and through the cross-ties *c*, said bolts being either headed or provided with nuts at either or both ends, and completing the truss. To this truss are secured two short axles, *a a*, the inner end of which terminates at and is rigidly attached to the under side of the cross-tie *c*, and the outer end of the axles is extended through or embedded in the foot of the brace *b*, and secured thereto by a pin, *f*, passing transversely through the brace and axle, and a clip, *n*, embracing the brace over the aforesaid pin, as illustrated in Fig. 5 of the drawings.

By the described connection of the axles with the two braces and cross-tie said axles are made to serve as additional braces to the truss.

T T represent the thills or shafts, which are formed in one piece with a bow, U, which unites the thills at the rear end, and serves to brace the same laterally, and with rearwardly-extended arms T′ T′, which terminate at and are rigidly attached to the lower portion or foot of the braces *b b*. Said thills, with the bow U and arms T′ T′, are formed of one straight stick of timber by making an incision in the center of its length, and, after splitting the timber to the requisite distance from the incision toward opposite ends of the timber, bending the central portion of the timber into the bow U and the split portions into the shape of the attaching-arms T′.

In order to relieve the truss of the central bearing of the bow U, and thus obviate torsional strain of the truss, I attach to the attaching-arms T′ in front of the truss a cross-bar, V, against which the central portion of the bow U rests, and to which it is fastened, as shown in Fig. 1 of the drawings.

h designates a combined stirrup and brace, which is attached by its forward end to the thill T, and is extended rearward and fastened to the bow U, and terminated at the junction of the cross-bar V and attaching-arm T′, where it is attached by the bolt which unites said cross-bar and arm.

l l represent braces extended from the clips *n n* to the attaching-arms T′ T′, and firmly secured thereto to re-enforce the connection between the braces *b b* and thills.

m and *m′* are braces extended, respectively, from the rear portion of the seat to the cross-tie *c*, and from the front portion of the seat to the bow U, and serving to firmly sustain the seat in its position.

Having described my invention, what I claim as new is—

1. The combination of the seat S, oblique braces *b b*, extended from the seat to the wheel-hubs, cross-tie *c*, and the axles *a a*, secured to the cross-tie and to the foot of the braces *b b*, substantially as set forth.

2. The combination of the seat S, oblique braces *b b*, extended from the seat to the wheel-hubs, cross-tie *c*, connecting said braces, posts *d d*, rods *e e*, and the axles *a a*, secured to the

cross-tie and to the foot of the braces, substantially as set forth and shown.

3. The combination of the seat S, oblique braces *b b*, extended from the seat to the wheel-hubs, cross-tie *c*, connecting said braces, posts *d d*, rods *e e*, and the short axles *a a*, clipped on the foot of the braces *b b*, and terminating with an attachment on the cross-tie *c*, substantially as described and shown.

4. The combination of the seat S, oblique braces *b b*, extended from the seat to the wheel-hubs, cross-tie *c*, connecting said braces, posts *d d*, rods *e e*, extended through the seat and through the end of the braces, longitudinally through the posts and through the cross-tie *c*, and the short axles *a a*, clipped on the foot of the braces *b b*, and terminating with an attachment on the cross-tie, substantially as described and shown.

5. In combination with the brace *b* and cross-tie *c*, the axle *a*, having its inner end secured to the cross-tie and its outer end embedded in the foot of the brace, the pin *f*, passing transversely through the brace and axle, and the clip *n*, embracing the brace over the pin, substantially as shown and set forth.

6. In combination with the truss S *b c d e* and axles *a a*, the thills T, having their attaching-arms T′ terminating at and secured to the braces *b b*, substantially as described and shown.

7. In combination with the truss S *b c d e* and axles *a a*, the thills T, formed with the attaching-arms T′ and bow U, and having said attaching-arms terminating at and secured to the braces *b b*, and the cross-bar V, secured to the attaching-arms in front of the truss, and connected with the bow U, substantially as described and shown.

8. The combination of the thills T, formed with the attaching-arms T′ and bow U, all in one piece, the cross-bar V, secured to the attaching-arms and bow of the thills, and the combined stirrup and braces *h h*, attached to the aforesaid thills, bow, and attaching-arms, substantially in the manner specified and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 29th day of May, 1884.

STEPHEN P. SOUTHARD. [L. S.]

Witnesses:
F. H. GIBBS,
WILLIAM C. RAYMOND.