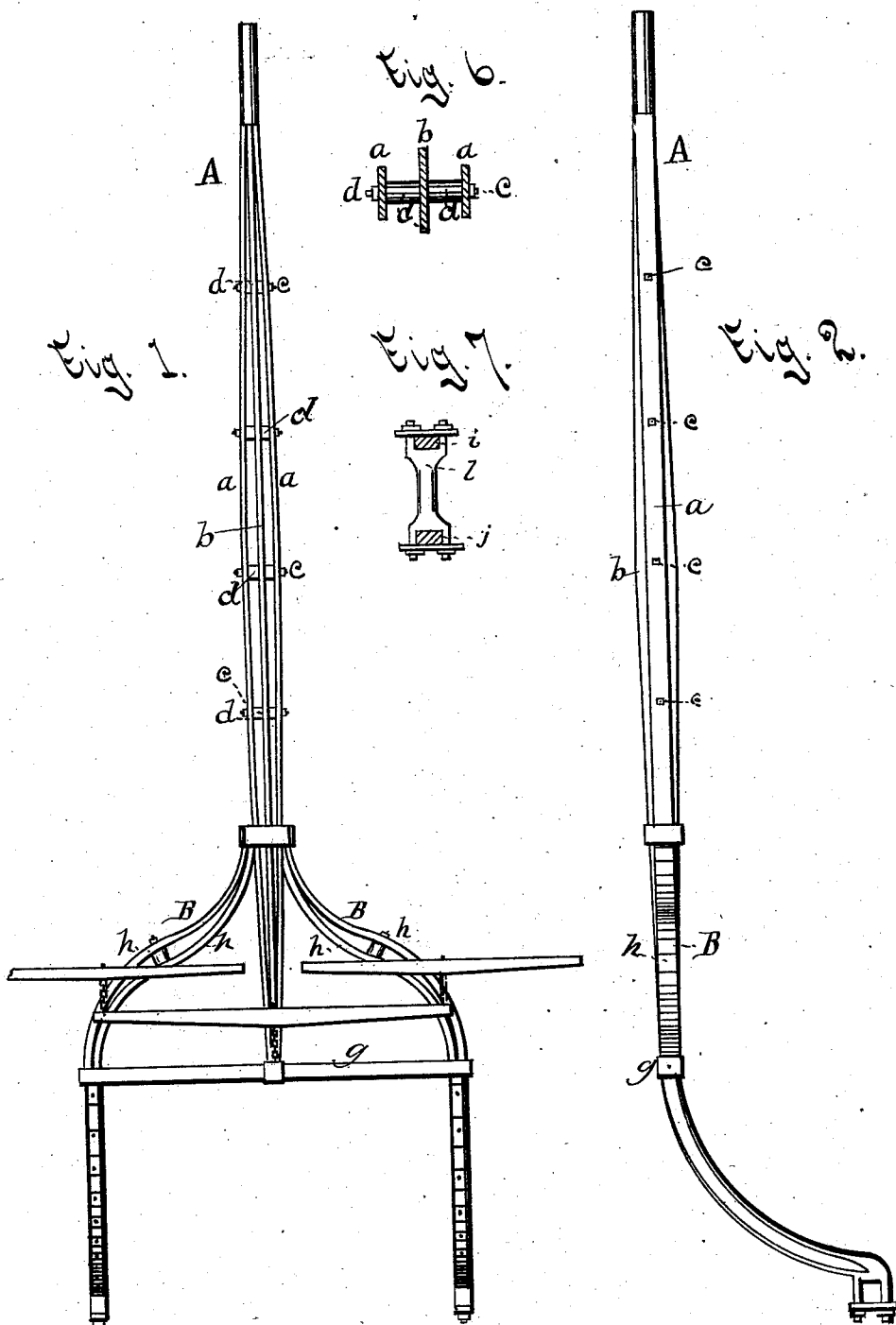


S. TOOMEY.
TWO WHEELED VEHICLE.

No. 294,528.

Patented Mar. 4, 1884.



Witnesses.
W. L. Lave
A. S. Brown

Inventor,
Samuel Toomey
By his Attorney, *J. S. Brown*

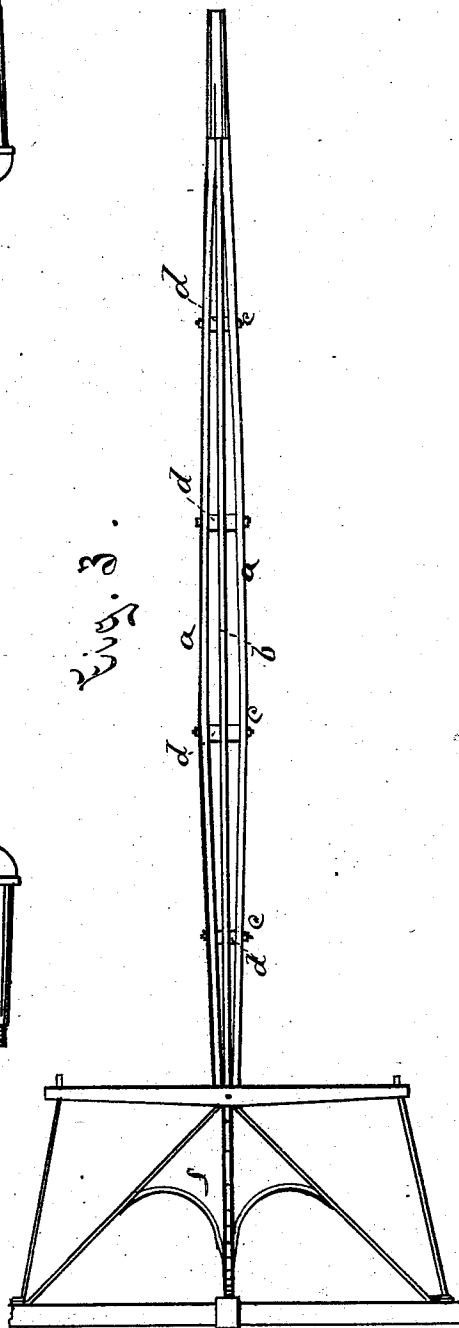
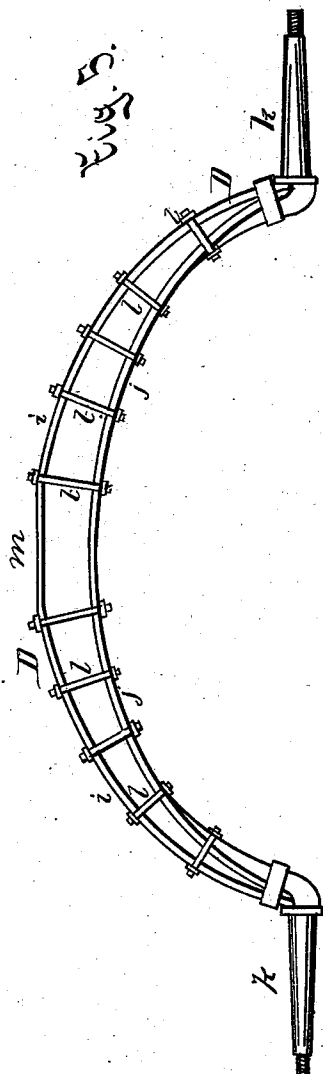
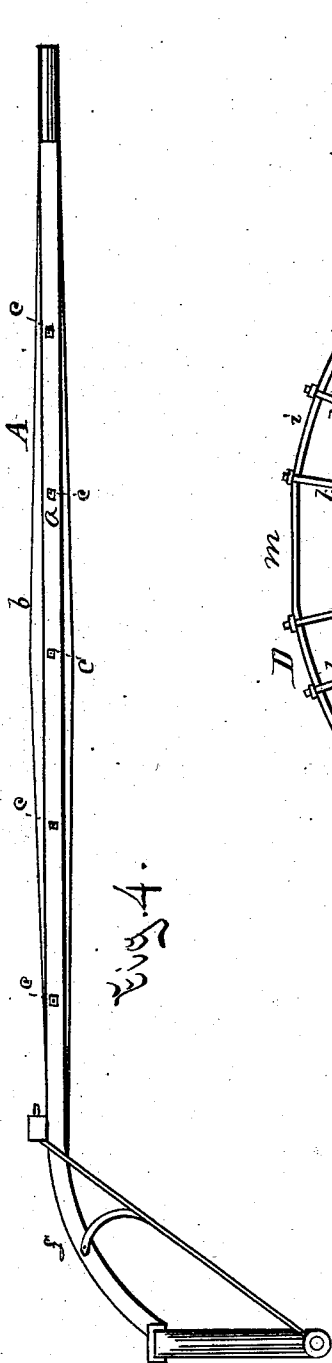
(No Model.)

3 Sheets—Sheet 2.

S. TOOMEY.
TWO WHEELED VEHICLE.

No. 294,528.

Patented Mar. 4, 1884.



Witnesses.
A. S. Brown
A. S. Brown.

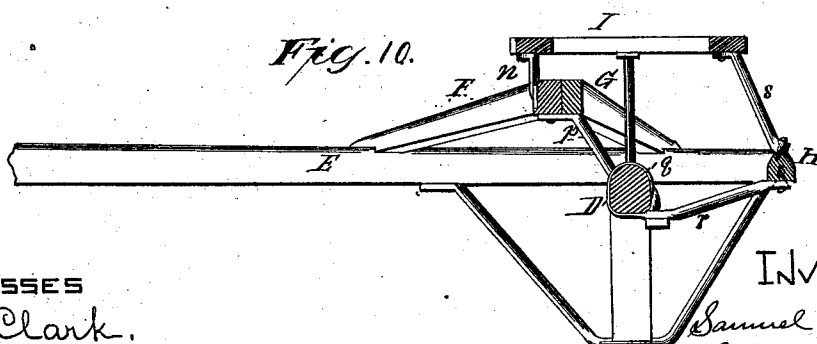
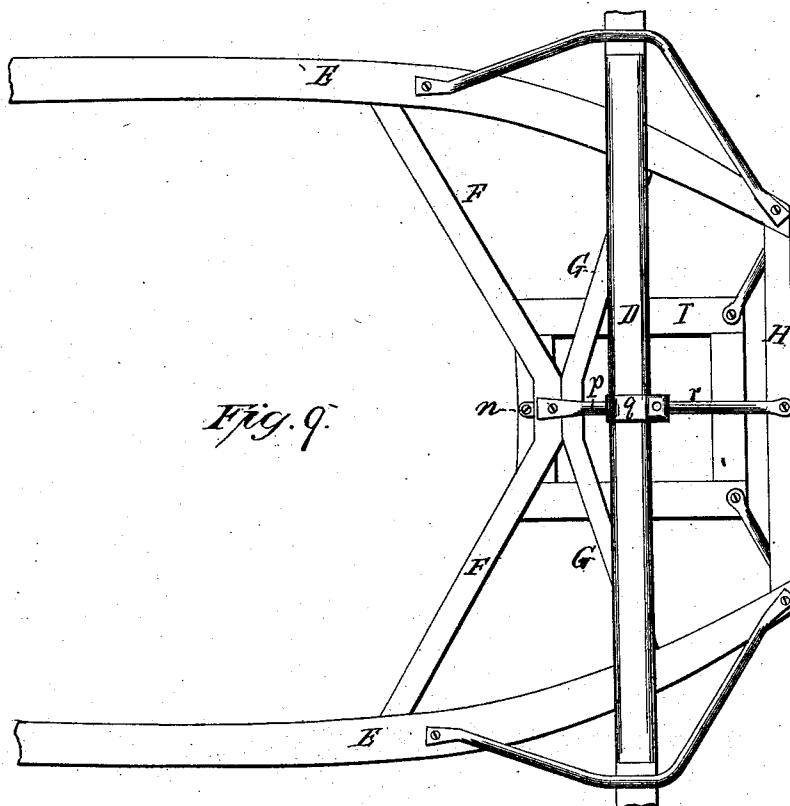
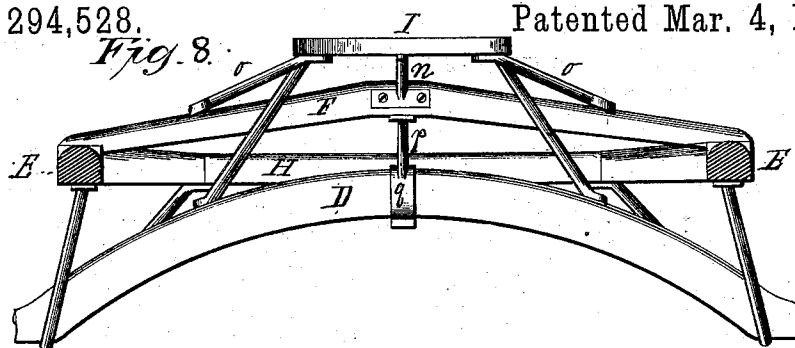
Inventor.
Samuel Toomey
By his Attorney, *J. S. Brown*

S. TOOMEY.

TWO WHEELED VEHICLE.

No. 294,528.

Patented Mar. 4, 1884.



WITNESSES
N. A. Clark.
A. S. Brown.

INVENTOR
Samuel Toomey
By his attorney,
A. S. Brown.

UNITED STATES PATENT OFFICE.

SAMUEL TOOMEY, OF CANAL DOVER, OHIO.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 294,528, dated March 4, 1884.

Application filed December 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL TOOMEY, of Canal Dover, in the county of Tuscarawas and State of Ohio, have invented certain Improvements in Light Vehicles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention consists in improvements in trussing the poles, hounds, axles, and seat-supports of light vehicles for driving—such as pole-carts and sulkies—substantially as hereinafter specified.

In the drawings, Figure 1 represents a top view of the pole and connected parts of a light pole-cart to which my improvements are applied or with which the said parts are connected; Fig. 2, a side view of the same; Fig. 3, a top view of the similar parts of a sulky constructed with my improvements; Fig. 4, a side view thereof; Fig. 5, a rear view of the trussed axle; Figs. 6 and 7, views showing some of the construction in detail; Figs. 8, 9, and 10, respectively, a front view, bottom view, and a central section of my seat-support trussing.

Like letters designate corresponding parts in all of the figures.

First, as to the construction of the pole A. I truss it substantially in the following manner: It is formed of three truss-pieces—namely, two outer strips, *a a*, and a central strip or brace, *b*. The three parts are secured together at the two ends of the pole, and the two outer strips, *a a*, are curved outward in the middle, as shown, so as to be separated in the center as far as may be desired for strength and stiffness, say two or three inches. The middle piece, *b*, is straight; and consequently there is equal space on both sides between it and the side pieces. The parts are connected at intervals by any suitable means. I have represented bolts *c c* extending through the three parts, with thimbles or washers *d d* around the bolts between the parts, as shown by the cross-section in Fig. 6. The strips may be all made of strong but comparatively light wood, and quite thin, not exceeding five-eighths of an inch for a light pole-cart or a sulky. The two

outer strips may be sawed from one piece and split the full length of the trussing, and for sulkies, as shown in Figs. 3 and 4, the curved rear end, *f*, of the pole not being split, but whole, as shown.

Another feature of improvement in the construction of the truss consists in widening the middle strip, *b*, in the middle beyond the width of the outer strips, *a a*, as shown in Figs. 2, 4, and 6. The width may be twice as great at the middle as the outer strips, and gradually narrowed to the same width at the ends of the truss. This form gives great rigidity and strength to the pole in the vertical direction, while the bending outward of the outer strips gives sufficient rigidity and strength horizontally. Thus a very strong as well as light pole is formed. This construction is applicable to the poles of all kinds of vehicles. It is obvious that this feature of widening a strip, *b*, is applicable also to two-strip trusses as well as three-strip trusses, either one or both strips being thus widened in the middle.

The next feature of improvement consists in splitting and trussing the fore part of the hounds B B, Figs. 1 and 2, forward of the cross-brace *g*. The bulging out of the two sides *h h* of the trussed part and the stays or braces between stiffen the hounds greatly without increasing the material and weight. The rear curved parts of the hounds are preferably retained whole without trussing.

Another feature of my invention consists in forming a trussed arched axle, D, substantially as herein described, whereby sufficient strength and stiffness are given thereto to enable me to dispense with a straight brace-rod extending from spindle to spindle of the axle. The arch is made high, and is trussed by combining two arched strips, *i j*, of different degrees of curvature, as shown in Fig. 5, so that the strips are united at the two ends where they are joined to the spindles *k k*, and separated farther and farther toward the middle. They are braced together at intervals, preferably by means of double clips *l l*, as shown in Fig. 7. The strips *i j* are suitably made of flat form on the adjacent sides, but rounded on the outer sides. For a sulky, the body may rest directly on a

flattened or straight portion, *m*, on the highest part of the upper strip, *i*; or an elliptic spring may be mounted on this strip under the seat.

Another feature of my invention consists in my improved seat-support trussing for these light vehicles, as shown in Figs. 8, 9, and 10. Let *D* represent the axle or upper truss-strip of the axle; *E E*, side shafts; *F G H*, cross-bars between the shafts, and *I* the seat or seat-frame.

First. I employ a T-shaped brace, *n*, connecting the seat *I* and front cross-bar, *F*, in the middle, as best shown in Fig. 8. This not only supports the seat in the middle of the front part thereof, but braces it against side racking. It also forms, in connection with two inclined side braces, *o o*, between the seat and said cross-bar *F* a complete truss, producing great strength and firmness in the support, though the parts may be quite slender and light.

Secondly. This front brace, *n*, in connection with a brace, *p*, extending from the cross-braces, or braces *F G*, to the axle *D*, or a clip, *q*, thereon, a brace, *r*, extending from the axle or the said clip thereon to the rear cross-bar, *H*, and a brace, *s*, extending from the cross-bar *H* to the seat *I*, forms a complete trussing of the parts from front to rear.

I claim as my invention—

1. A trussed vehicle-pole formed of two outwardly-bowed strips and a middle strip, for the purpose herein specified.

2. A trussed vehicle-pole formed of two outward strips and a middle strip made wide at the middle and narrow at the ends, for the purpose specified.

3. In combination with a vehicle-pole, hounds trussed in the part forward of the cross-brace, substantially as and for the purpose herein specified.

4. An arched axle trussed with two arches of different degrees of curvature, substantially as set forth.

5. The T-shaped brace *n*, in combination with the cross-bar *F* and seat *I*, for the purpose specified.

6. The combination of the brace *n*, braces *o o*, cross-bar *F*, and seat *I*, substantially as and for the purpose herein specified.

7. The combination of the braces *n p r s*, cross-bar *F*, axle *D*, cross-bar *H*, and seat *I*, substantially as and for the purpose herein specified.

In testimony whereof I have signed my name in the presence of two witnesses.

SAMUEL TOOMEY.

Witnesses:

JOHN A. HOSTETTER,

JOSEPH H. HOSTETTER.