

(No Model.)

S. PERRY & D. A. SPRAGUE.

THREE WHEELED DRAY.

No. 328,514.

Patented Oct. 20, 1885.

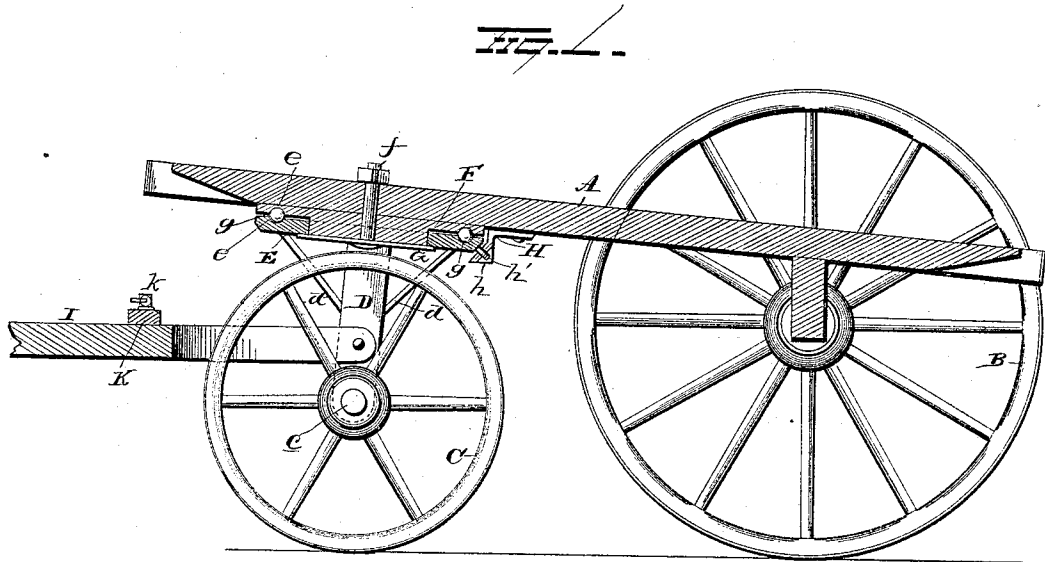


FIG. 2.

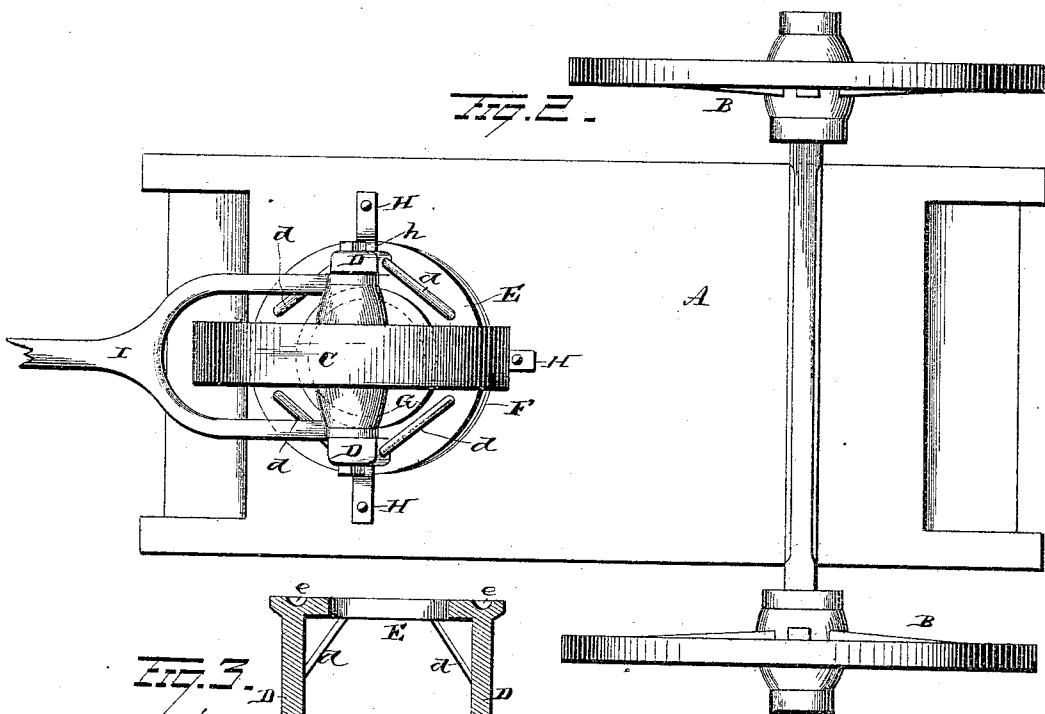
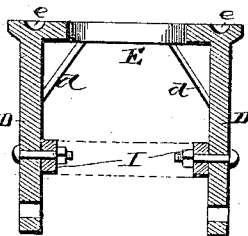


FIG. 3.



WITNESSES
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UNITED STATES PATENT OFFICE.

STUART PERRY, OF NEWPORT, AND DANIEL A. SPRAGUE, OF POLAND, N. Y.

THREE-WHEELED DRAY.

SPECIFICATION forming part of Letters Patent No. 328,514, dated October 20, 1885.

Application filed March 3, 1885. Serial No. 157,656. (No model.)

To all whom it may concern:

Be it known that we, STUART PERRY and DANIEL A. SPRAGUE, of Newport and Poland, respectively, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Three-Wheeled Drays; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in drays, the object of the same being to provide against the switching of the tongue or thills of a dray when passing over a rough road or a street paved with cobble-stones; a further object being to provide a dray which will occupy a reduced space in the road when delivering or receiving goods from the sidewalk without lessening its carrying capacity; a further object being to provide improved means for attaching the tongue or thills, whereby the strain on the king-bolt and fourth-wheel shall be reduced to a minimum; a further object being to provide an improved construction of fourth-wheel and wheel-supports; and with these ends in view our invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional view. Fig. 2 is a bottom plan view, and Fig. 3 a detached view, of the fourth-wheel and the portion of the dray which forms its seat.

A represents the body of the dray. It is supported upon the two rear wheels, B, and the single front wheel, C. The wheel C is loosely mounted on an axle, *c*, secured in the lower ends of two depending standards, D, rigidly secured to the fourth-wheel E; or, if preferred, the wheel C may be rigidly secured on the axle journaled in suitable boxes in the ends of the standards.

The term "fourth-wheel" is used in this specification in the same sense as the term "fifth-wheel" is used in the ordinary four-wheeled vehicle. The standards are firmly braced by the diagonal rods *d*, or by means of other approved braces.

The fourth-wheel E, with its depending arms and wheel secured therein, is pivotally

secured to the flat circular seat F, formed integral with or rigidly secured to the body A by the king-bolt *f*. The bolt *f* is provided with a washer, G, which engages the lower face of the fourth-wheel E. The face of the seat F, or the upper face of the fourth-wheel E, or both, are provided with an annular groove or with annular grooves, *e*, in which anti-friction balls or rollers *g* are placed, and which serve to prevent wear, and also prevent cramping or difficulty in turning with a heavy load.

The fourth-wheel E is further held in position by means of two or more brackets, H, preferably four, which are secured firmly to the body A, and lip over on the under side of the fourth-wheel. The lips *h* of the brackets are preferably provided with anti-friction rollers *h'*, to prevent wear and allow the wheel E to turn freely.

The front wheel, C, is necessarily small, and when the tongue is attached to the axle, or nearly in a horizontal plane therewith, the strain upon the fourth-wheel and king-bolt is very great and liable to produce serious injury, especially when the rear wheels meet with any obstruction. On the other hand, when the tongue or thills are attached to the body, or nearly in a horizontal plane therewith, there is a liability of over strain by the front wheel meeting with an obstruction. To obviate the strain and liability to damage resulting therefrom, we have provided the rigid standards above-described, and secure the tongue I or thills thereto at a point between the plane of the axle and the body such that when the dray is loaded with a load of medium weight and traveling on a smooth road the resistance of the front wheel and the rear wheels will be exactly balanced.

The tongue I is forked, as shown, for convenience in straddling the wheel, and is secured to the standards in a free vertically-rocking motion. If thills are used, they may be attached one to each standard D, and firmly braced together in front of the wheel.

K is the evener, and *k* represents the single-trees attached thereto.

It is evident that many changes may be made in the forms of the several parts shown without departing from the spirit and scope of our invention. For example, the stand-

ards D may consist of concave V-shaped pieces secured to the fourth-wheel and serving to brace themselves, and the king-bolt might be formed as a stud integral with these seat
 5 F, and forming a rigid and enlarged bearing for the wheel E, the latter being secured thereon by a nut and washer, or by a washer and several bolts or screws about the edge of the end of the stud; hence we do not wish to
 10 limit ourselves strictly to the construction set forth.

We are aware that a three-wheeled dray having the front wheel pivotally secured to the body is not broadly new, and make no
 15 claim thereto; but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent is—

1. In a three-wheeled dray, the combination, with the body, the fourth-wheel, and the
 20 seat for the fourth-wheel, of brackets secured to the body and lipping over the edges of the

fourth-wheel, and anti-friction rollers interposed between the lips and fourth-wheel, substantially as set forth. 25

2. In a three-wheel dray, the combination, with the body provided on its lower face with a circular seat, of a fourth-wheel secured to the circular seat, depending standards rigidly secured to the fourth-wheel, a ground-wheel
 30 journaled in said standards, a pole connected to the standards, and brackets secured to the body of the dray and bearing against the lower face of the fourth-wheel, substantially as set forth. 35

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

STUART PERRY.
 DANIEL A. SPRAGUE.

Witnesses:

DANIEL P. WOOSTER,
 J. T. WOOSTER.