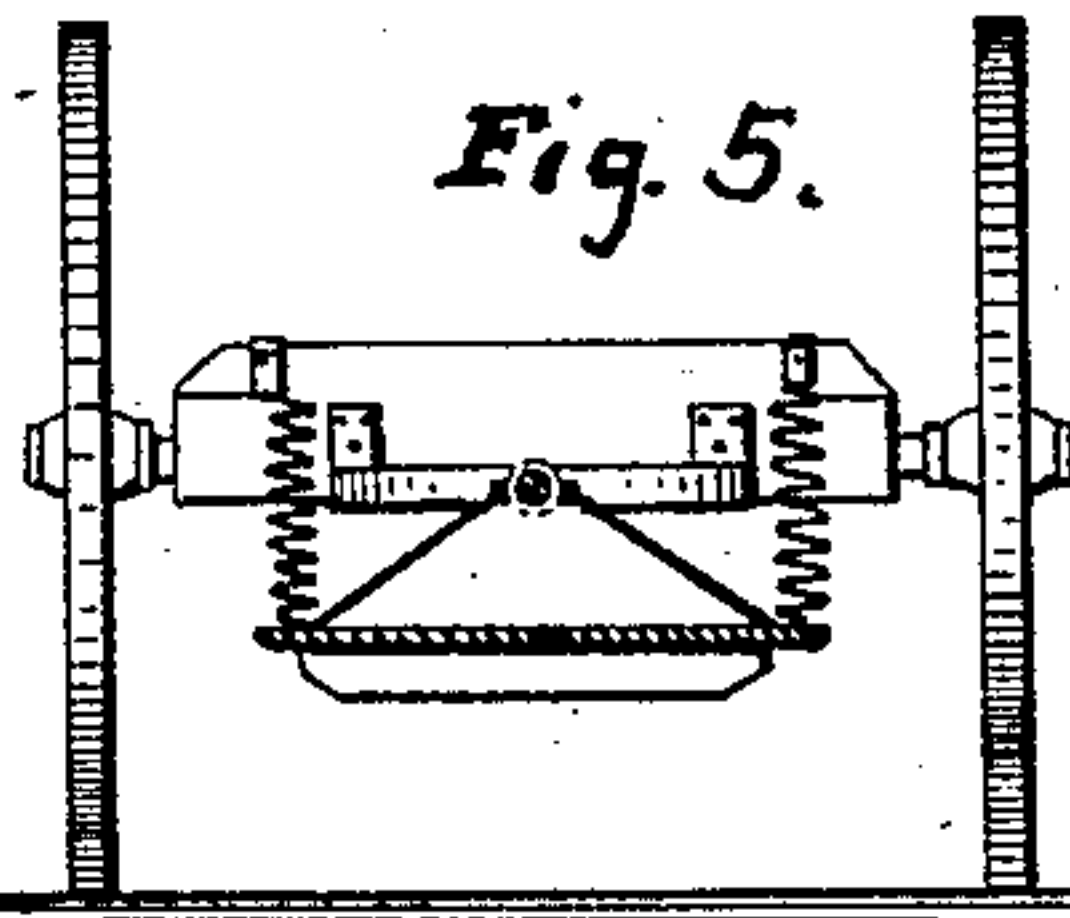
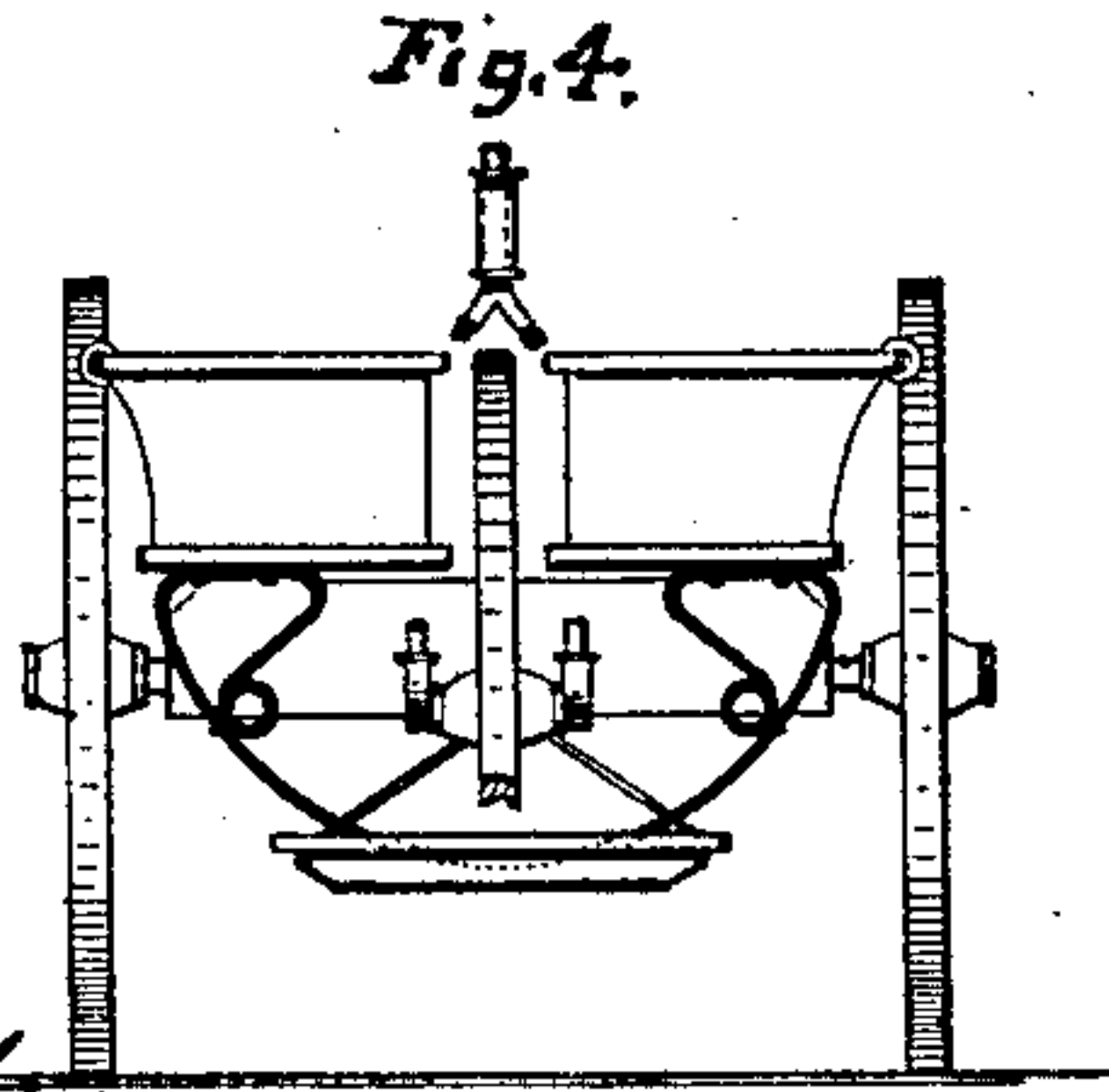
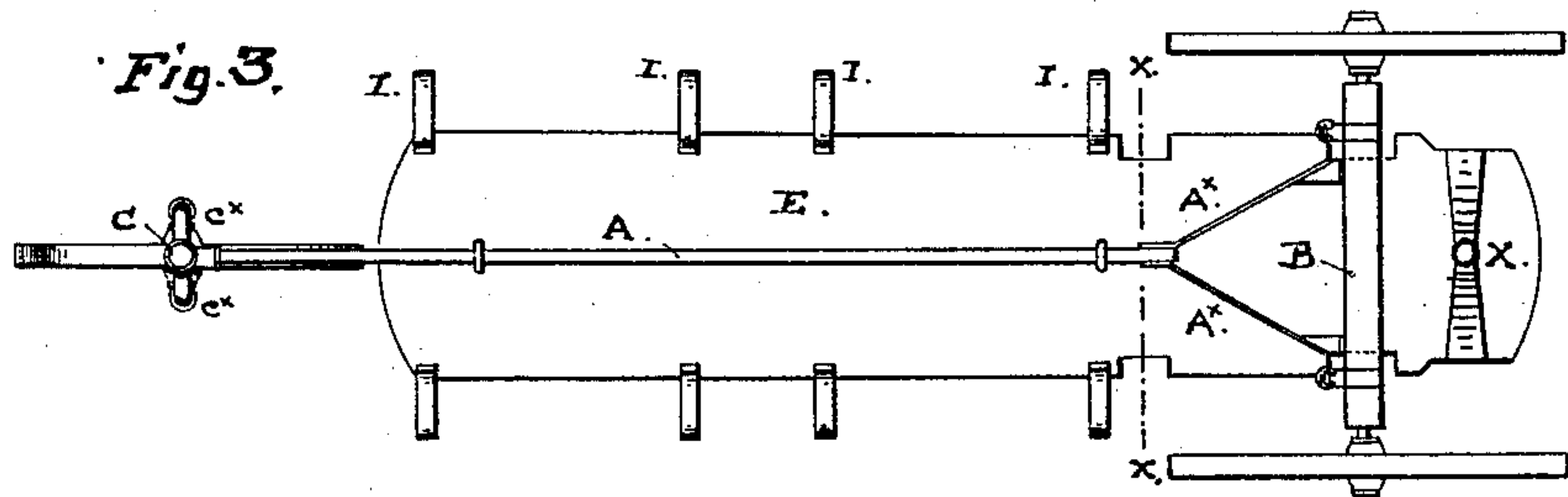
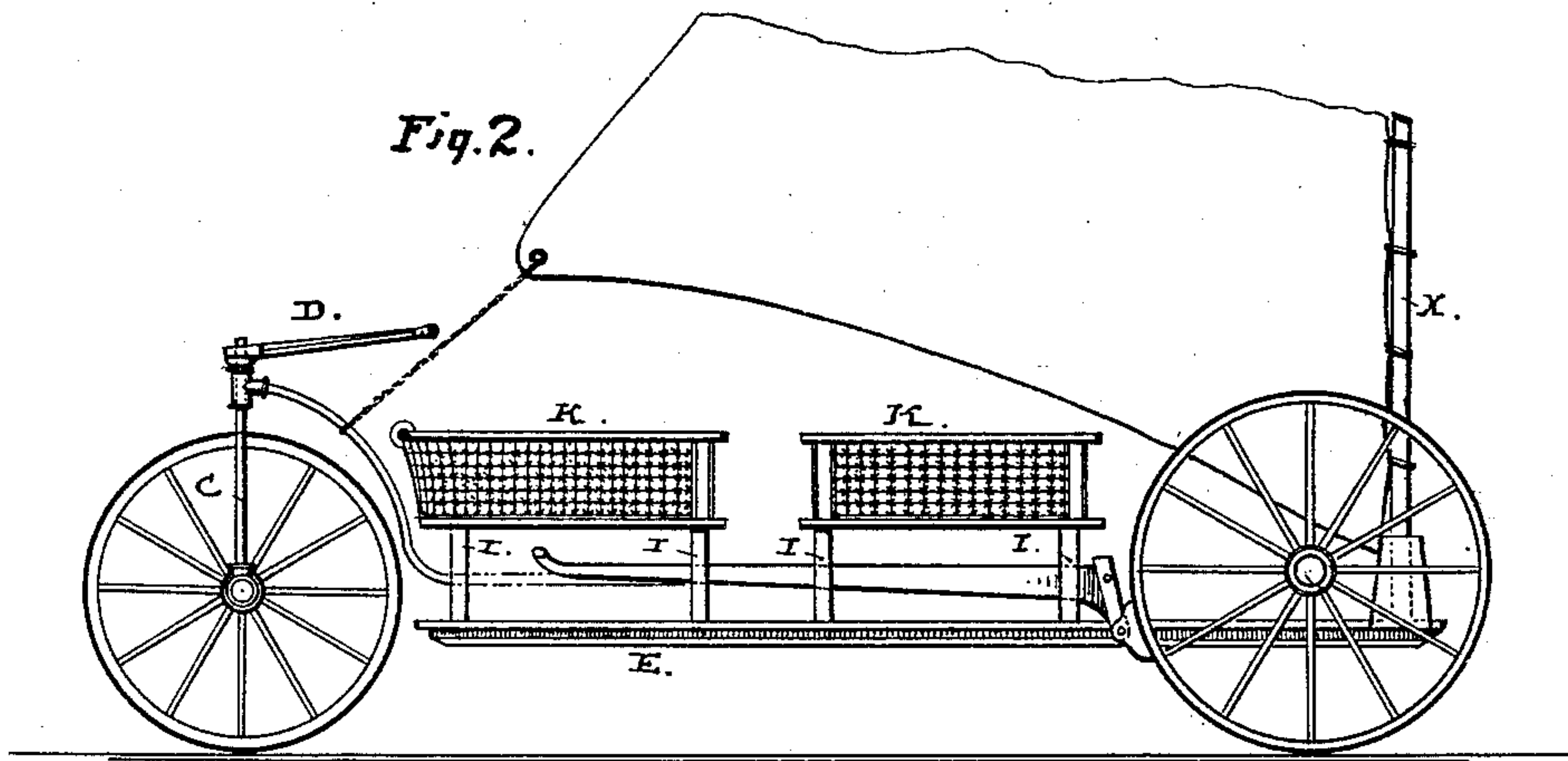
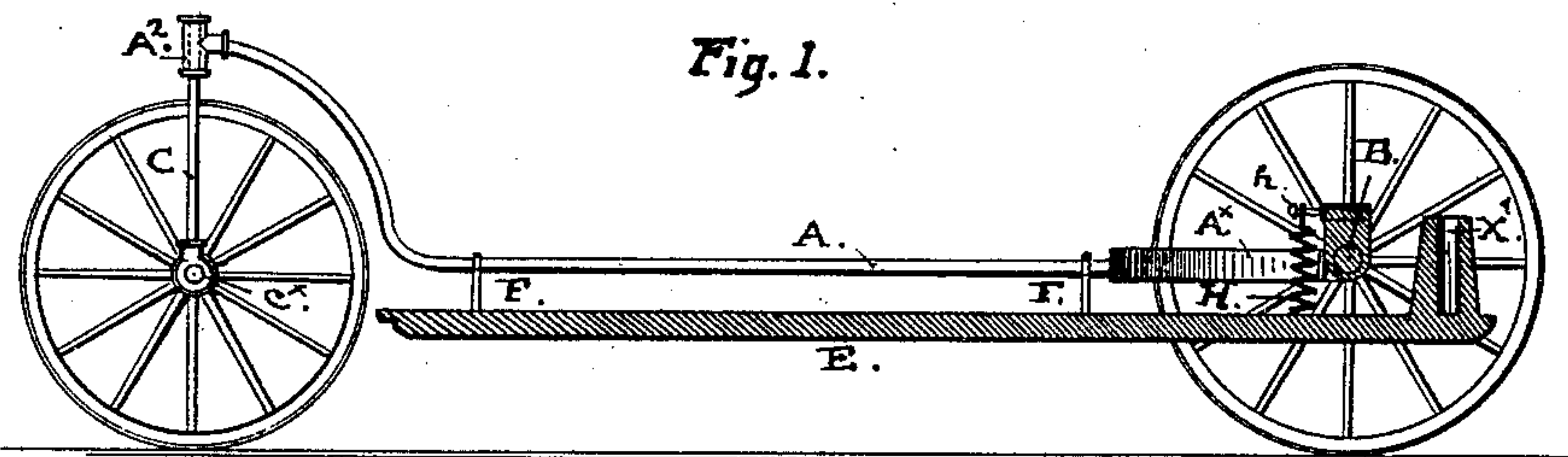


(No Model.)

C. H. COFFIN.
THREE WHEELED VEHICLE.

No. 452,425.

Patented May 19, 1891.



Witnesses:

A. M. Chas. H. Coffin
R. J. Brown

Inventor:

Charles H. Coffin
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UNITED STATES PATENT OFFICE.

CHARLES H. COFFIN, OF SAN FRANCISCO, CALIFORNIA.

THREE-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 452,425, dated May 19, 1891.

Application filed October 6, 1890. Serial No. 367,256. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. COFFIN, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Three-Wheeled Vehicles, of which the following is a specification.

My invention has for its object the production of a pleasure-vehicle to be propelled by wind-power, steam, or other agency; and to such end and purpose the invention consists in certain novel parts and combination of parts hereinafter fully described, and pointed out in the claims.

The nature of the improvements which constitute the present invention and the manner in which I proceed to construct and combine the same will be fully understood from the following description and the drawings that accompany and form part of this specification.

Referring to the drawings, Figure 1 represents in side view a vehicle constructed according to my invention, in which the propelling agent employed is the force of the wind. Fig. 2 is a longitudinal section through the body, the seats for passengers being removed. Fig. 3 is a plan of the body and running-gear without the seats. Fig. 4 is a rear elevation with the steering-wheel and its yoke partly broken away. Fig. 5 is a cross-section through the platform and running-gear.

The principal points or features of my improvements comprise a construction of frame for three wheels and a suspended body or platform on which is carried the load. The frame is composed of a front axle for two wheels and a single reach having at the rear end a yoke for a single steering-wheel. The platform, is hung from the reach on which it is arranged to swing laterally, and the seats for passengers are mounted on cross-springs along the sides of the platform running fore and aft or lengthwise. When the wind is employed as the propelling power, a mast is stepped in a socket provided at the front end of the platform and a sail is bent to it. Instead of a single mast, a vehicle of large size may be fitted with two masts. By means of strong coil-springs connected to the axle the platform is kept in substantially a horizontal position under varying conditions of load and

yet is allowed to swing or tilt under the force of the wind against the sails, so that the body of the vehicle will yield to the wind without affecting the running-gear, and thus prevent any danger of capsizing.

A indicates a reach formed of a rod, bar, or tube, and B the front axle, to which the reach is fixed at the front end by braces $A^x A^x$. At the rear end the reach is arched to extend over the wheel and terminates in a socket A^2 to take the standard of the steering-wheel yoke C. This yoke has boxes $c^x c^x$ on the lower end of its two members for the axle of the steering-wheel, and the tiller D, fixed on the end of the standard above the socket, extends forward in convenient position for use. Between the front wheels and this steering-wheel the platform E is suspended from the reach by bars or links F, that are attached to the sides of the platform and to sleeves or collars on the reach, or in such manner that the platform can swing readily from these points of suspension.

H H are the coil-springs attached to the platform at the outer edges and to fixed points $h h$ above on the axle. They are adjusted to keep the platform level under ordinary conditions, but at the same time to allow it to tip or take an inclination as the force of the wind acting against the sail becomes excessive.

I I are bow-springs fixed at the middle in the center of the platform and having their ends carried out beyond the sides and bent upward to support the seats K K at suitable height above the platform. The ends of the springs are bent inwardly and the seats set across them lengthwise of the platform. As thus constructed it will be noticed that as the body-gear is suspended from the reach it will incline to one side or the other at great or less angle without affecting the stability of the running-gear, and that this movement is controlled by the coil-springs, and in yielding to any force or pressure in such direction the spring on one side is compressed while the other is expanded. The strength of the springs to be employed must be taken into consideration and will be governed by the capacity of the vehicle and the particular mode of propulsion which is to be used.

In employing steam-power, or hand-power, or driving-power other than sails, the plat-

form is not exposed to forces that cause it to incline to one side or the other, except, perhaps, when the vehicle makes a sharp turn, and therefore the springs that control the lateral movements of the platform need not be quite so strong as in the sail-rigged vehicle.

This vehicle is designed to be propelled by hand-power or by a motor as well as by sails, and in many cases when sail-rigged it will be furnished with auxiliary power for use when the wind fails. Such auxiliary power can be applied to the front wheels in a suitable and convenient manner by a skilled mechanic without any special directions.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a three-wheel vehicle, of the front wheels and axle, the rear steering-wheel, the curved reach A, and the platform E, suspended beneath and from the reach, substantially as described.

2. The combination, in a three-wheel vehicle, of the axle-reach A, suspended platform

E, and the springs H H, applied for operation as set forth.

3. The combination, in a three-wheel vehicle, of the reach A, the platform E, suspended from the reach, the seats mounted on springs on the platform, the rear steering-wheel, and the front axle and wheels, substantially as described.

4. A three-wheel vehicle having a reach with a forked front end by which it is attached to the front axle and a curved neck at the rear end, a steering-wheel swiveled in said neck, a swinging platform suspended from the reach, the yielding stays H H, connecting the front end of the platform at the sides to the front axle, and the socket or step and support for a mast on the front end of platform.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

CHAS. H. COFFIN. [L. S.]

Witnesses:

EDWARD E. OSBORN,

CHAS. E. KELLY.