

**No. 630,976.**

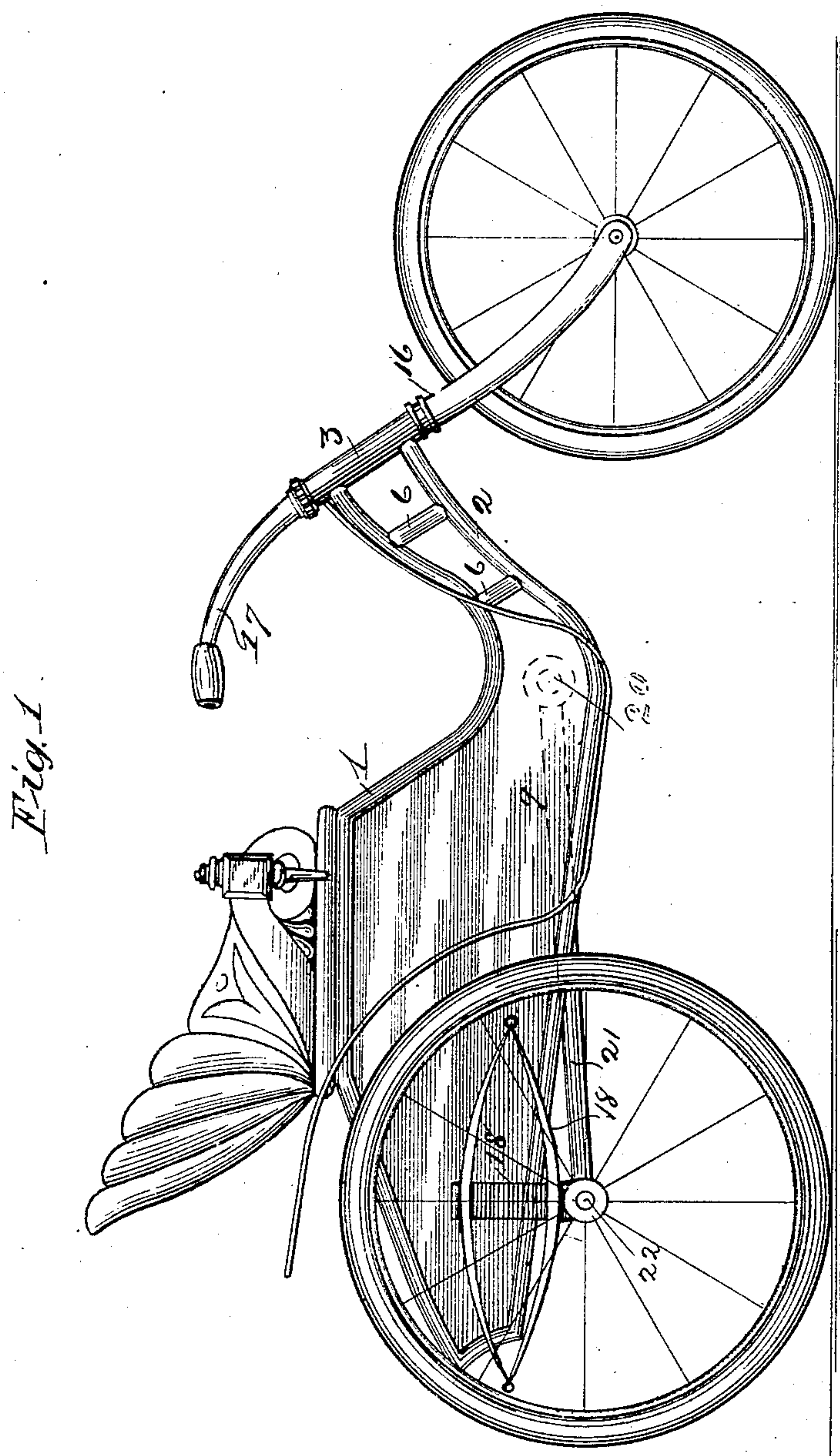
**Patented Aug. 15, 1899.**

**H. F. EASTMAN.**  
**FRAME FOR MOTOR VEHICLES.**

(Application filed Nov. 28, 1898.)

(No Model.)

**3 Sheets—Sheet 1.**



*Witnesses*

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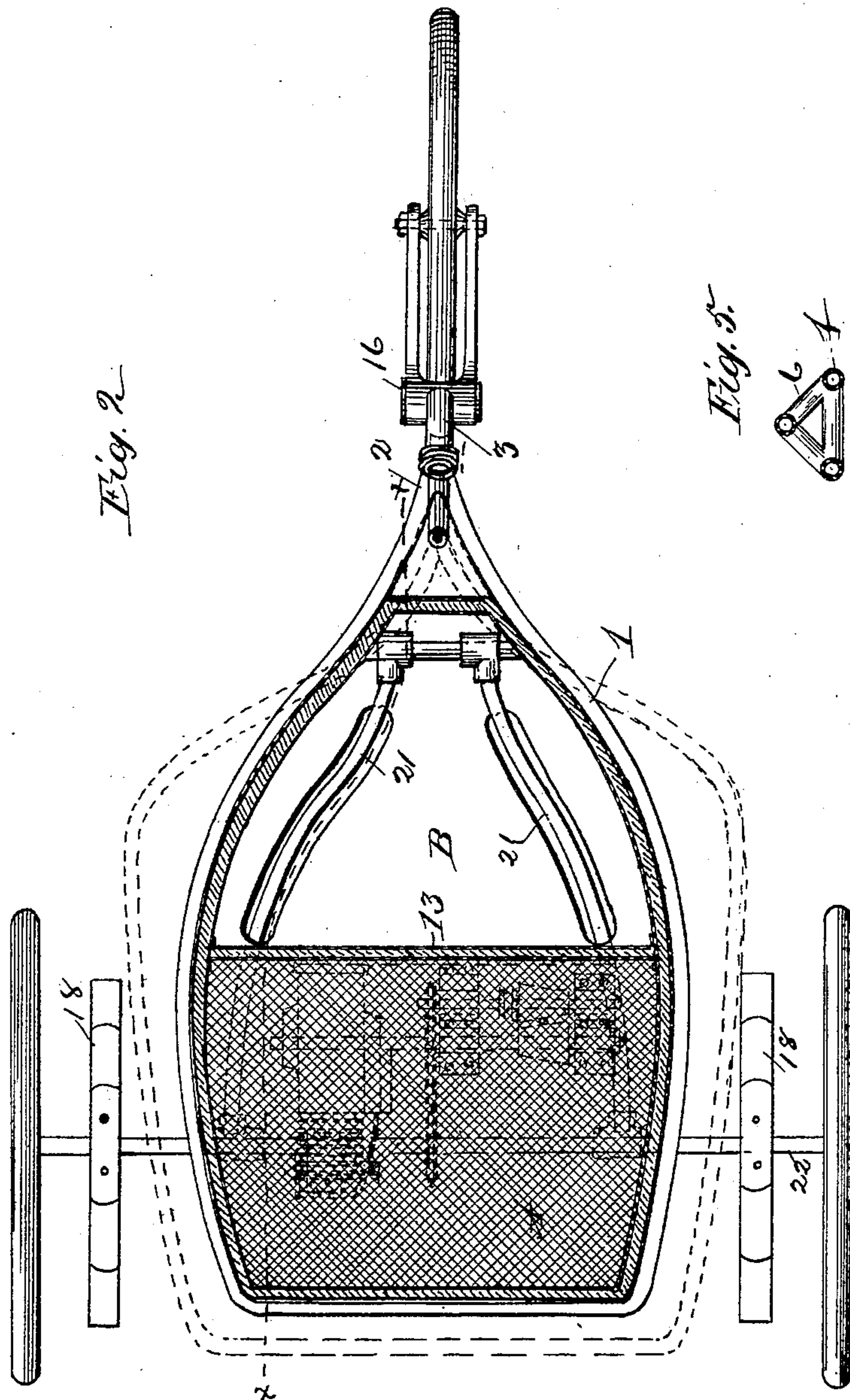
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3 Sheets—Sheet 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY F. EASTMAN, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO  
M. M. HOBART, OF SAME PLACE.

## FRAME FOR MOTOR-VEHICLES.

SPECIFICATION forming part of Letters Patent No. 630,976, dated August 15, 1899.

Application filed November 28, 1898. Serial No. 697,610. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY F. EASTMAN, a citizen of the United States of America, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Frames for Motor-Vehicles, of which the following is a specification.

The objects of my invention are to provide a motor-vehicle frame which shall have the advantages of the maximum strength and rigidity with extreme lightness and a practically indestructible body capable of a high exterior finish, incombustible, and non-conducting of heat, which would destroy the exterior finish and be a matter of some discomfort to the riders.

The invention also has some reference to muffling the sound of the motor mechanism therein and also to quieting the rattling of the parts of the frame on one another.

My invention is exemplified in the accompanying drawings, as hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the device. Fig. 2 is a horizontal section showing plan of interior and exterior construction. Fig. 3 is a longitudinal vertical section on line *xx*, Fig. 2. Fig. 4 is a transverse section of a corner of frame and siding, and Fig. 5 is a transverse section of gooseneck connecting the body of the device with the stem of the front fork.

In the views, 1 is the body portion of the vehicle, which is seen to be inclosed by bicycle-tubing, by which it is outlined and which forms the principal support thereof. This body portion is shaped somewhat like the body of a cabriolet and is narrowed in front to form a "gooseneck" connection 2 with the front stem 3, in which is inserted the front fork of a tricycle. It will be seen that the tubing is braced by cross-bars 4 4 at the bottom and 5 5 at the top, and a triangular formation of connecting-bars at 6 in front completes a truss to stiffen the gooseneck.

To further stiffen the frame and to provide means for attaching removable side plates *T*, angle-bars 7 are attached to the tubing within the body of the vehicle, the wider

flange or tongue of the T-iron being brazed or welded thereto, so that the cross-bar projects within the body.

The detachable siding is constructed to accomplish the double use of sound-muffler and insulator to prevent the heat of the engine from reaching the exterior of the vehicle. This siding consists in a sheet of asbestos 8, upon either side of which are placed the reinforcing metal plates 9. Rivets or bolts 10 serve to retain the parts closely together. The siding is seen to be secured between the tubular frame and the cross-flanges of the T-irons, and bolts 11 may pass through them to hold them rigidly together. The exact shape of the T or angle irons is immaterial to the invention; but, as shown, the cross-flanges are placed at an angle of about one hundred and thirty-five degrees to the wider flange for convenience in securing the parts together.

A central partition 13 separates the body of the vehicle into two chambers, one, A, for the engine, and a separate one, B, in which the combustible-fluid tank is placed where the heat from the motor will not affect it.

The bottom of the chamber in which the motor is placed is open and provided with a double netting 14 to give plenty of ventilation to the motor. The rear extremity is also open and protected by netting at 15, thus affording free circulation for air throughout the chamber.

The front portion of the frame is mounted upon the fork 16 and single bicycle-wheel, while the single handle-bar 17 serves to guide the vehicle.

The body of the vehicle rests upon the side springs 18, which bear upon a sleeve 19 upon the axle, and swings freely upon the transverse shaft 20, which is connected with the rear axle by means of hounds 21, pivoted upon the axle and transverse shaft. The body of the vehicle projects slightly downward from the rear to give more room for the feet in front and to raise the rear above the axle.

I do not claim as this invention the exact form of motor or driving mechanism nor the exact shape of any of the parts; but



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

1. In a motor-vehicle frame, a metallic body portion in combination with a rigidly-trussed front portion terminating in a stem for a front-wheel fork, substantially as described.
2. In a frame for a motor-vehicle, steel tubing supporting the body portion, the said tubing being extended to form a gooseneck connection with a single front-fork stem, and removable siding for said frame, substantially as described.
3. In a motor-vehicle, a frame composed of steel tubing outlining the body portion, and extending forward to form a gooseneck connection with the front-fork stem, in combination with detachable siding for the body portion, the said siding being partly composed of insulating and incombustible material, substantially as described.
4. In a motor-vehicle, the combination with a body portion outlined in weldless tubing, of a front stem, and a gooseneck connection therewith extending in continuous lines of tubing from said body portion, and a truss formation in said gooseneck, substantially as and for the purpose set forth.
5. In a motor-vehicle frame, in combination, a body portion formed from metal tubing, in upper and lower portions following the outline of the said body portion, a front stem, "gooseneck-shaped" continuations of said body portion connecting the same with said stem, and sections of tubing connecting the upper and lower members of the "gooseneck" to form a "truss" of triangular section, substantially as described.
6. In a motor-vehicle frame, in combination, a body portion formed of metal tubing and reinforcing angle-bars secured longitudinally to said tubing, substantially as described.

dinally to said tubing, substantially as described.

7. In a motor-vehicle frame, in combination, body and front "gooseneck" portions formed by continuous metal tubing outlining the same, cross-braces forming a truss in the gooseneck portion, and cross-bars connecting the tubing in the frame, substantially as described.

8. In a frame for a motor-vehicle in combination, rigid body and gooseneck portions composed of metal tubing, reinforcing angle-bars secured longitudinally to the tubing of said body portion, and detachable insulating siding and covering plates for said body portion, substantially as described.

9. In the body of a motor-vehicle, in combination, a tubular metal frame, and an insulating siding and covering therefor, consisting of asbestos plates, reinforced by metal plates on either side substantially as described.

10. Means for covering the body of a motor-vehicle consisting of plates of insulating and incombustible material, in combination with reinforcing metal plates upon either side thereof, substantially as described.

11. In a motor-vehicle, in combination, a frame composed of body and gooseneck portions formed of continuous metal tubing, an insulating covering for said body portion, an insulating partition in said body portion, and means for mounting said body and gooseneck portions upon the front-fork stem and rear axle, substantially as described.

Signed by me at Cleveland, Ohio, this 15th day of November, A. D. 1898.

HENRY F. EASTMAN.

Witnesses:

WM. M. MONROE,  
JOHN H. BEHR.