

(No Model.)

R. F. VAUGHAN.
RUNNING GEAR FOR VEHICLES.

No. 440,819.

Patented Nov. 18, 1890.

Fig. 1.

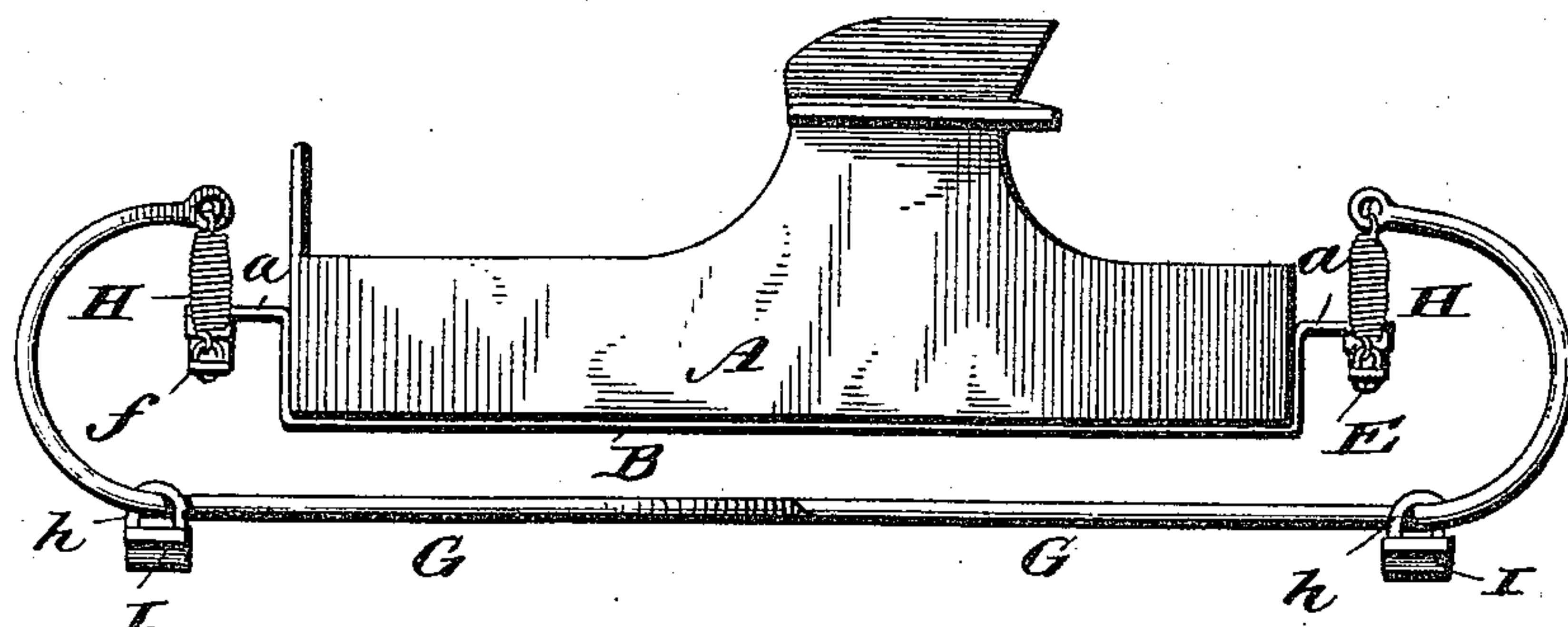


Fig. 2.

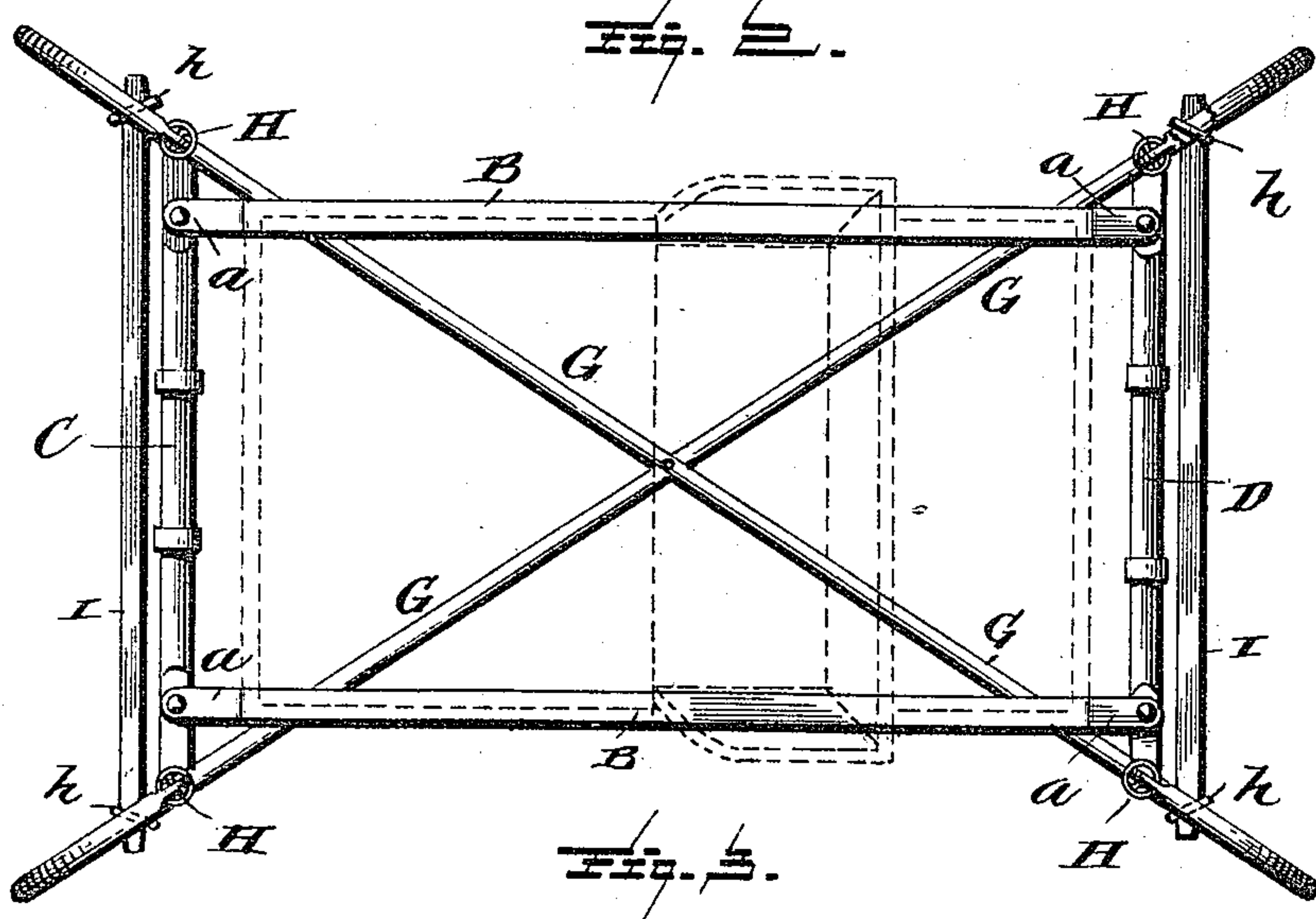
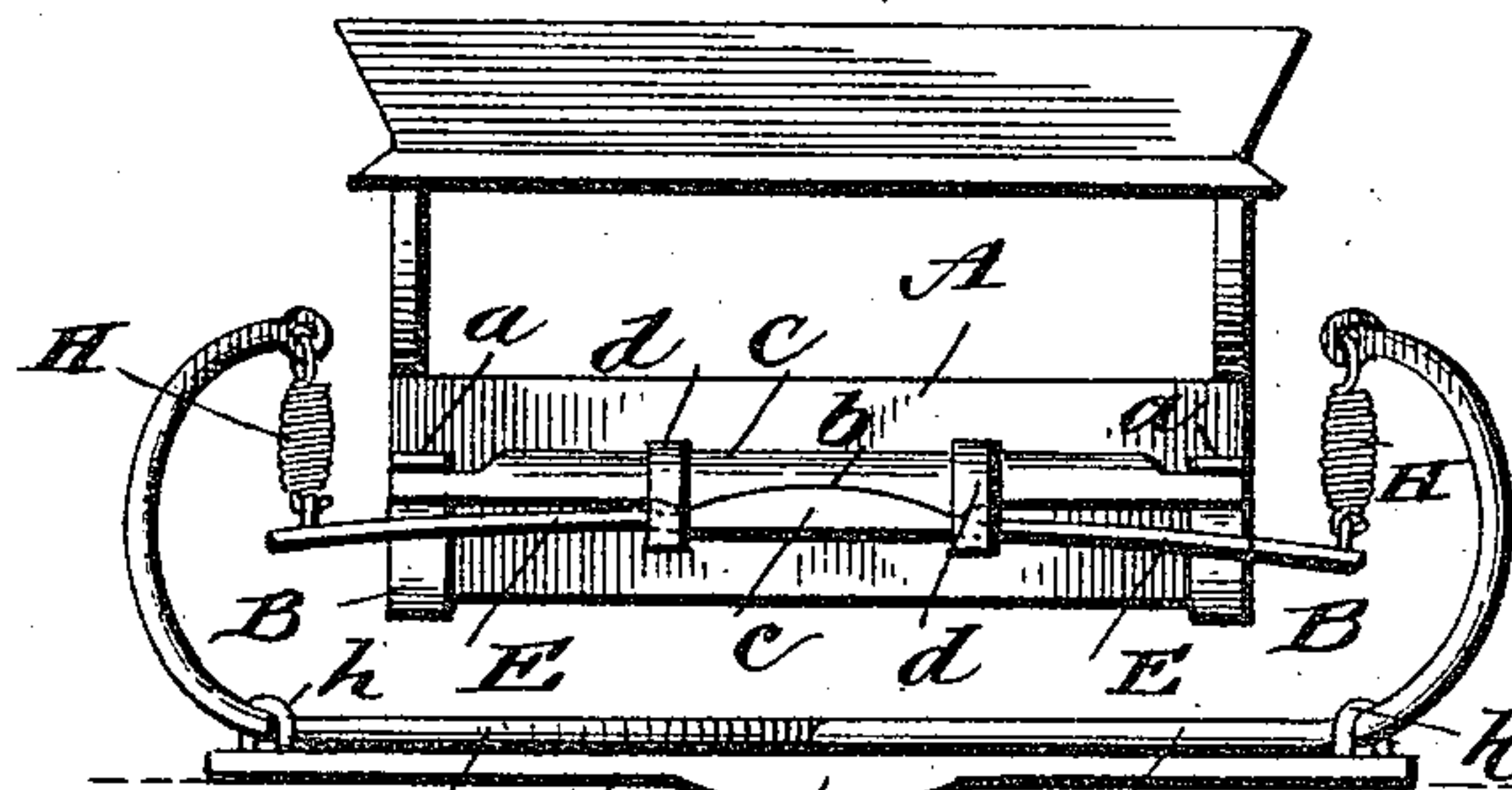


Fig. 3.



Witnesses

L. C. Kells.
E. A. Bond

Inventor

Robert F. Vaughan
Cha. H. Fowler
Attorney

UNITED STATES PATENT OFFICE.

ROBERT F. VAUGHAN, OF SAILOR SPRINGS, ILLINOIS.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 440,819, dated November 18, 1890.

Application filed September 19, 1890. Serial No. 365,516. (No model.)

To all whom it may concern:

Be it known that I, ROBERT F. VAUGHAN, a citizen of the United States, residing at Sailor Springs, in the county of Clay and State of Illinois, have invented certain new and useful Improvements in Running-Gear; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in running-gear for vehicles of that class wherein the body of the vehicle is supported solely by springs; and it has for its objects, among others, to provide an improved vehicle of this order wherein the running-gear shall be very strong, simple, and not liable to get out of order, and in which the body of the vehicle shall be free to swing at each movement of the vehicle, thus furnishing a very easy-riding vehicle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation illustrating my improvement. Fig. 2 is a top plan with the body indicated in position by dotted lines. Fig. 3 is a rear view.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the body of the vehicle, which is provided along each side with a metallic bar B, secured to the under side thereof and turned up at each end and having a bearing against the ends of the body, as shown in Fig. 1, the upper ends terminating in horizontal portions *a*, to which the rear and front cross-bars C and D are secured in any suitable manner. The rear and front cross-bars are provided centrally upon their under surface with a cavity or recess *b*, as seen most clearly in Fig. 3, and into which fits a correspondingly-shaped enlargement or bulge *c* on the spring-bars E and *f*, one of

which is seen in Fig. 3. These bars are clipped to the rear and front cross-bars upon each side of the enlargements, as seen in Fig. 3, by clips *d*, the ends of the bars being free, as seen in Fig. 3.

G are crossed rods secured together in any suitable manner at their points of intersection, as seen in Fig. 2, and having their free ends curved upwardly and inwardly toward the corners of the body, as shown. These free ends are formed with eyes to which are connected one end of coiled springs H, the other ends of which are connected to the free ends of the spring-bars E and *f*, as seen in Fig. 3.

The crossed bars are connected to the plates I, which are designed to be secured to the axles. These plates are formed with enlargements *g*, designed to rest in correspondingly-shaped depressions in the axle. The connection between these parts is such that the parts may be readily adjusted to accommodate bodies of different lengths. I have shown this connection as consisting of the clips *h*, which embrace the crossed bars angularly, as seen best in Figs. 1 and 2, so as to have a binding action, and by moving the plates farther apart or nearer together the crossed bars will be brought together or separated at their free ends, the clips holding the parts in their adjusted positions. The enlargements and depressions serve to prevent movement of the two parts thus provided, which in the case of the rear and front spring-bars is important, as it serves to keep the said bars at all times at right angles to the reach, and thus lightens the draft. The coiled springs at the corners, in connection with the spring cross-bars, render the action very easy, and forms a most comfortable riding vehicle.

What I claim as new is—

1. The combination, with the body and the bars B, secured along the under side thereof at each side with their ends extended up and secured to the ends of the body and terminating in horizontal portions, of the crossed spring-bars G and the springs connected to said spring-bars and supporting the body, as set forth.

2. The combination, with the body and the

bars B thereon, of the rear and front cross-
bars, the spring-bars secured thereto, the
crossed bars G, having their free ends curved
upwardly and inwardly toward the corners
5 of the body, and the springs connecting the
free ends of the crossed bars with the free
ends of the rear and front spring-bars, as set
forth.

In testimony that I claim the above I have
hereunto subscribed my name in the pres- 10
ence of two witnesses.

ROBERT F. VAUGHAN.

Witnesses:

WM. REEVES,

W. L. BURKE.