

(No Model.)

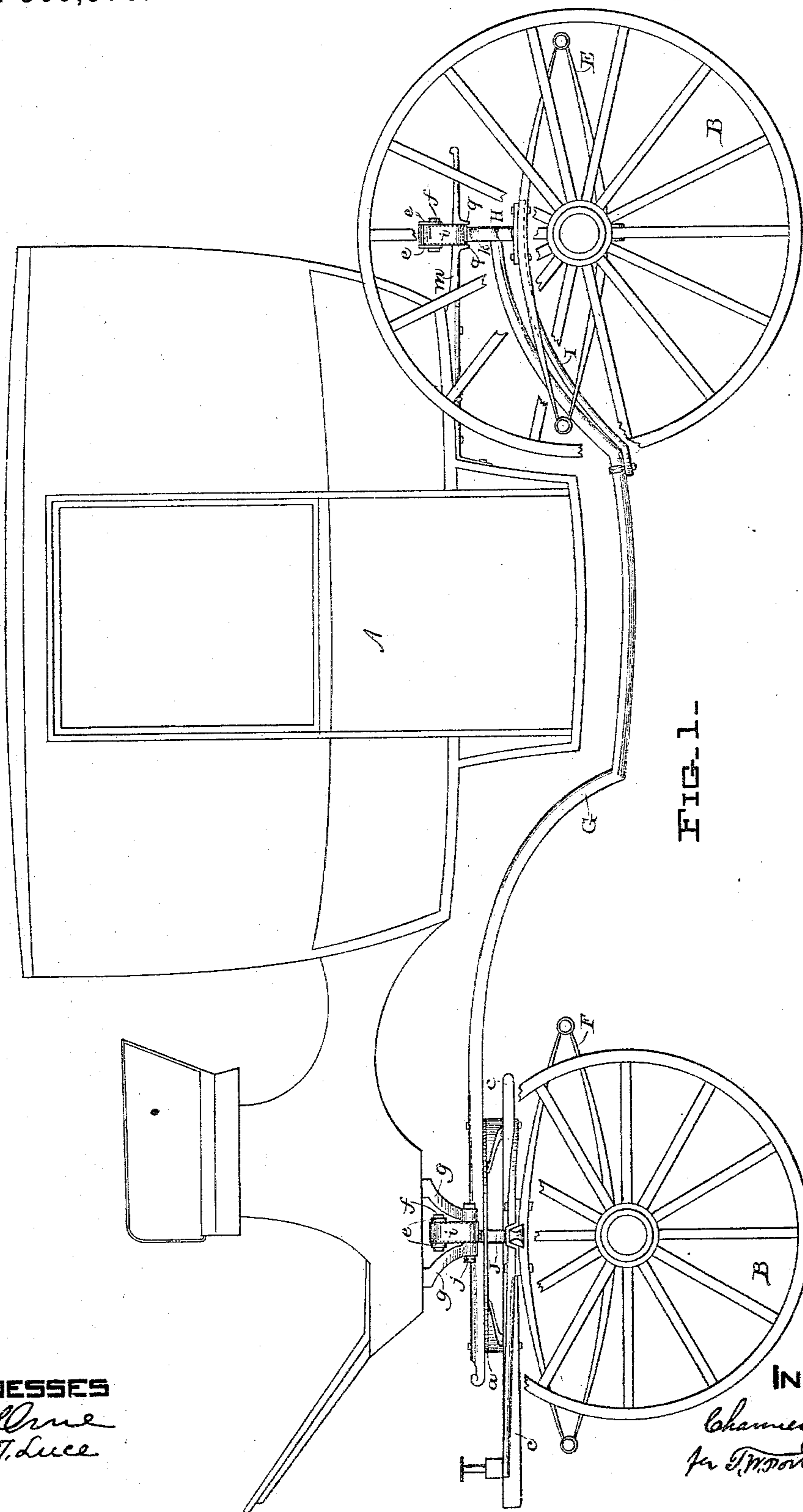
4 Sheets—Sheet 1.

C. THOMAS.

CARRIAGE.

No. 369,370.

Patented Sept. 6, 1887.



WITNESSES

Albion
Emos T. Luce

INVENTOR

Chamney Thomas
for J. M. Porter Atty

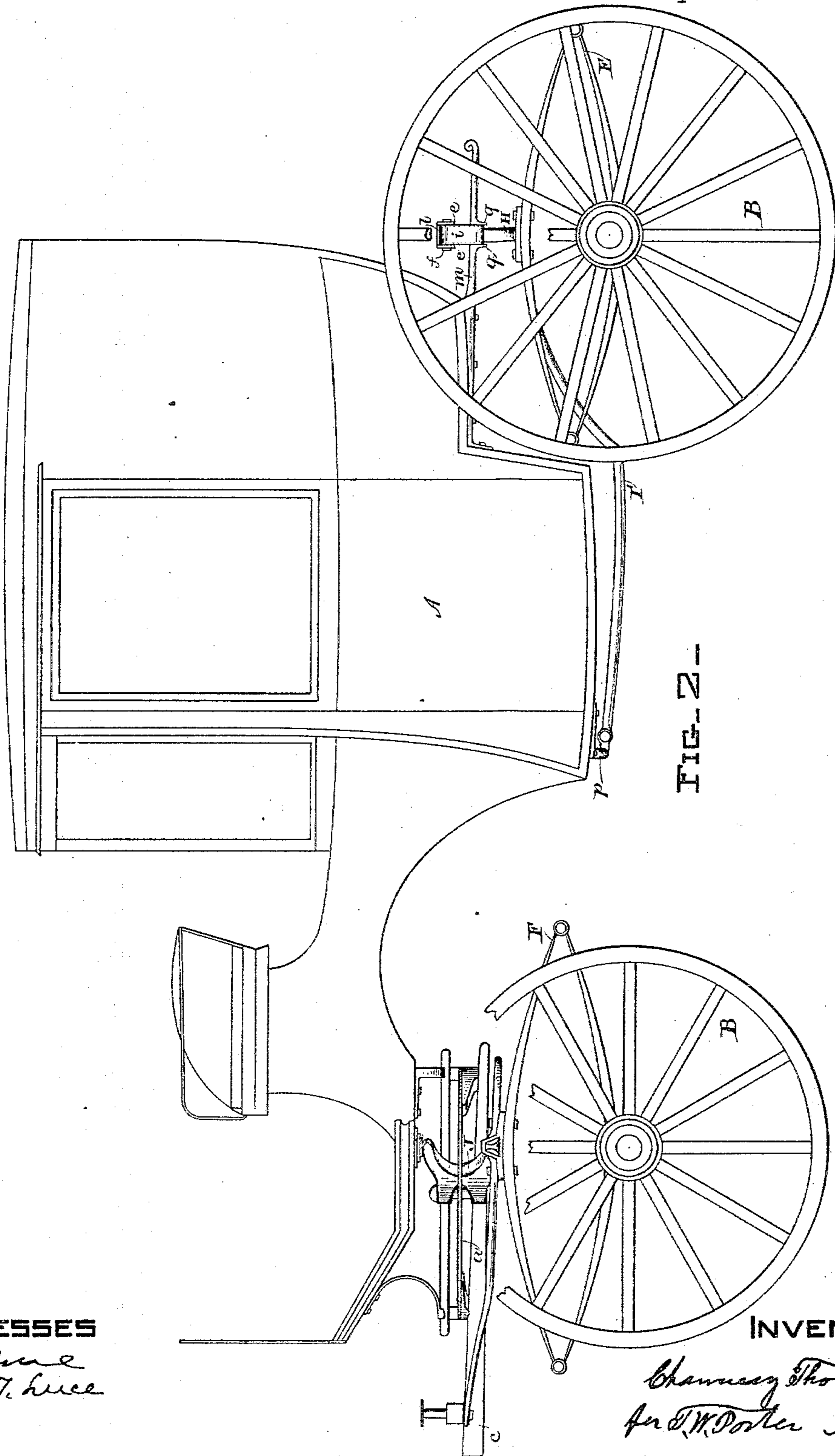
(No Model.)

4 Sheets—Sheet 2.

C. THOMAS.
CARRIAGE.

No. 369,370.

Patented Sept. 6, 1887.



WITNESSES

A. D. Stone
Enos T. Rice

INVENTOR

Chamney Thomas
per E. W. Porter Atty.

(No Model.)

4 Sheets—Sheet 3.

C. THOMAS.
CARRIAGE.

No. 369,370.

Patented Sept. 6, 1887.

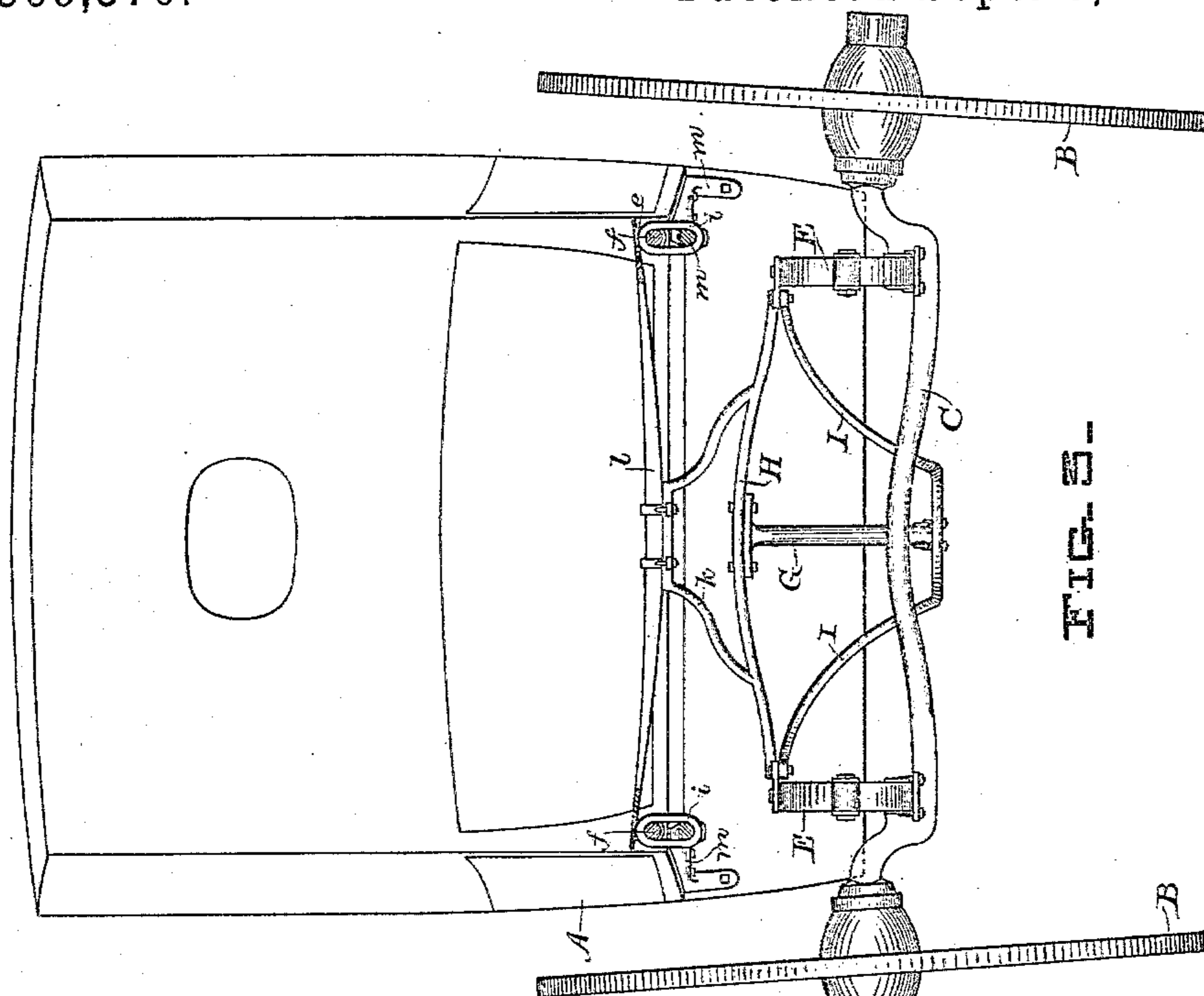


FIG. 3.

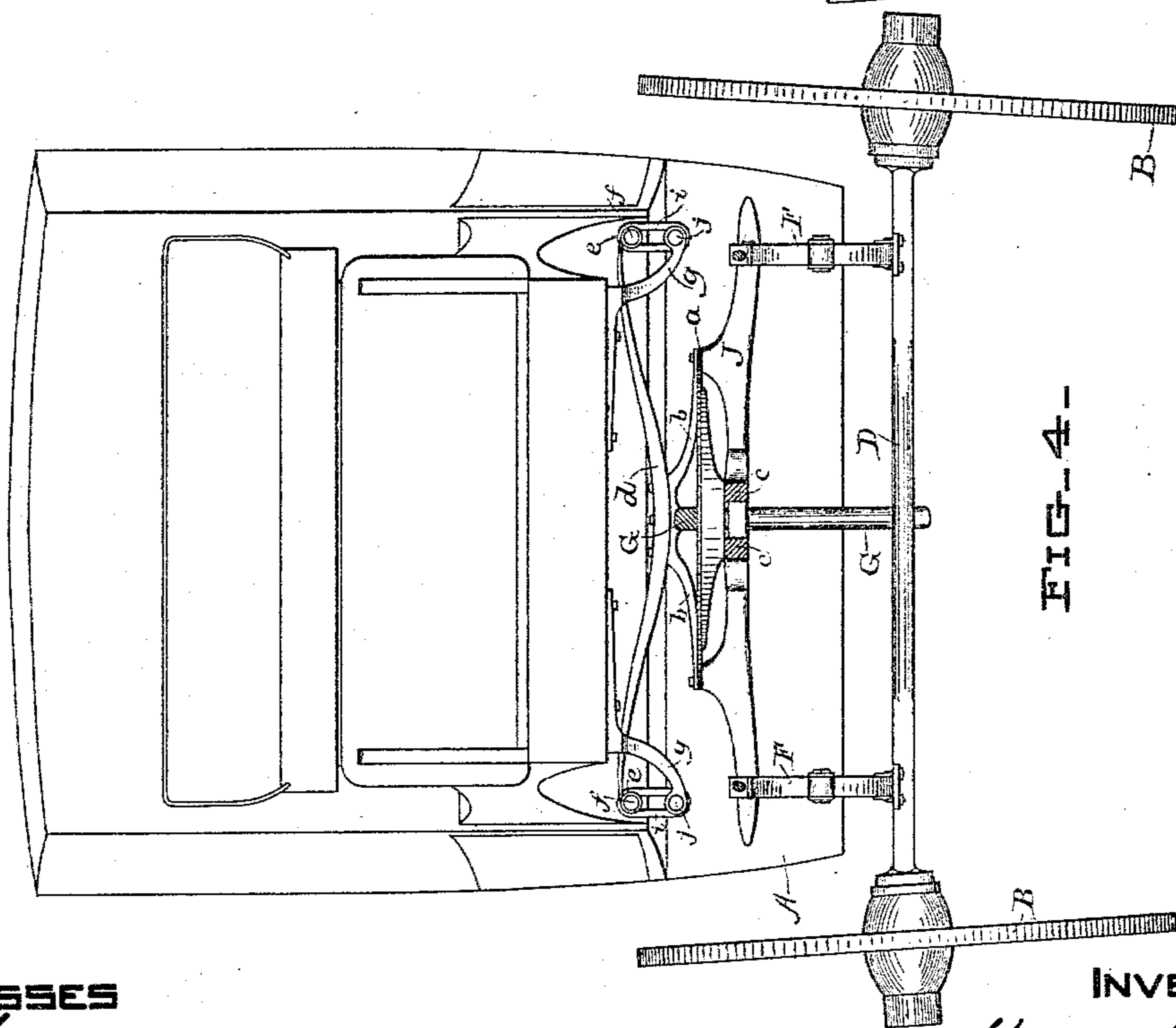


FIG. 4.

WITNESSES

Albion
Ernest T. Luce

INVENTOR

Chamney Thomas
per O. M. Foster Atty

(No Model.)

4 Sheets—Sheet 4.

C. THOMAS.

CARRIAGE.

No. 369,370.

Patented Sept. 6, 1887.

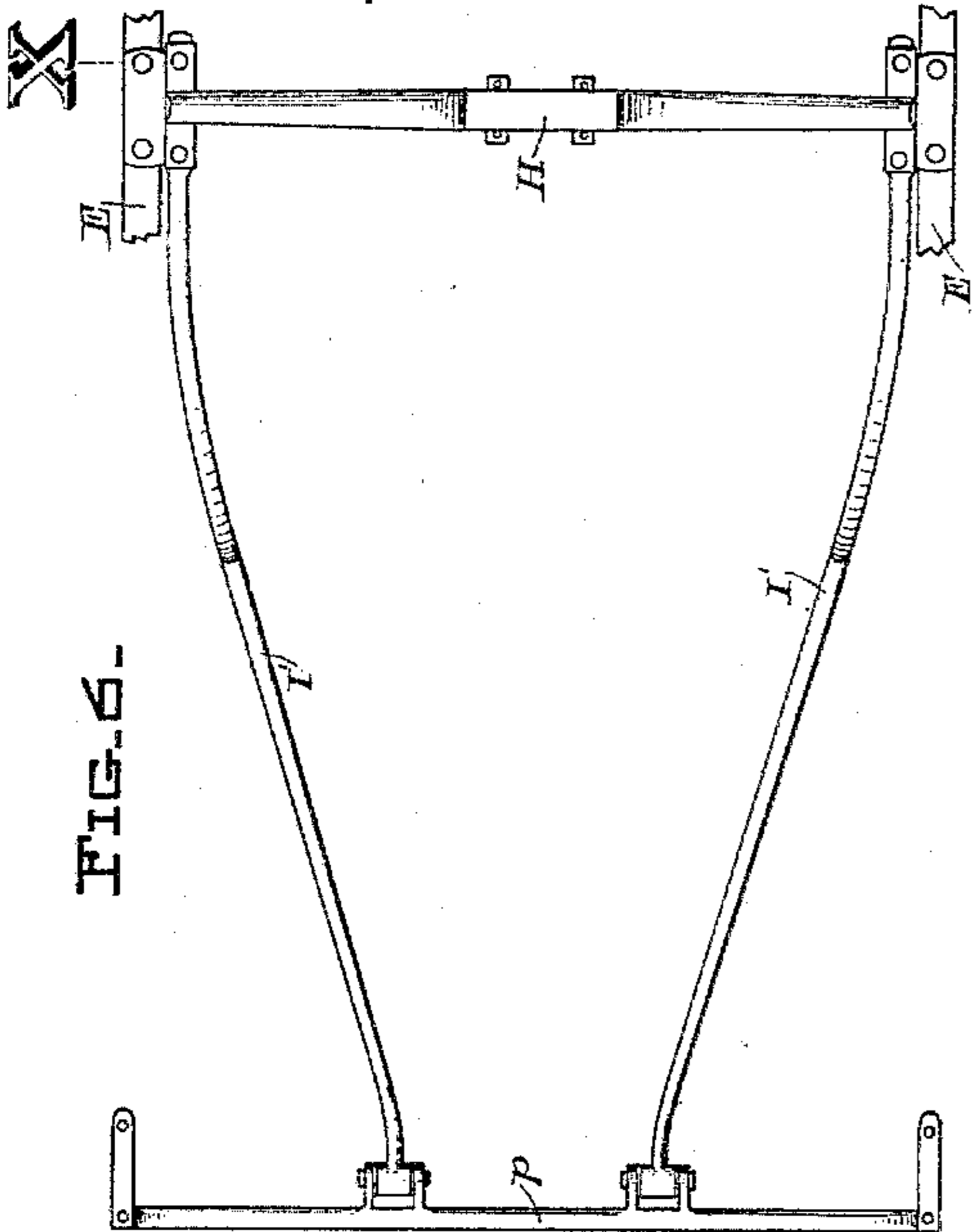


FIG. 6.

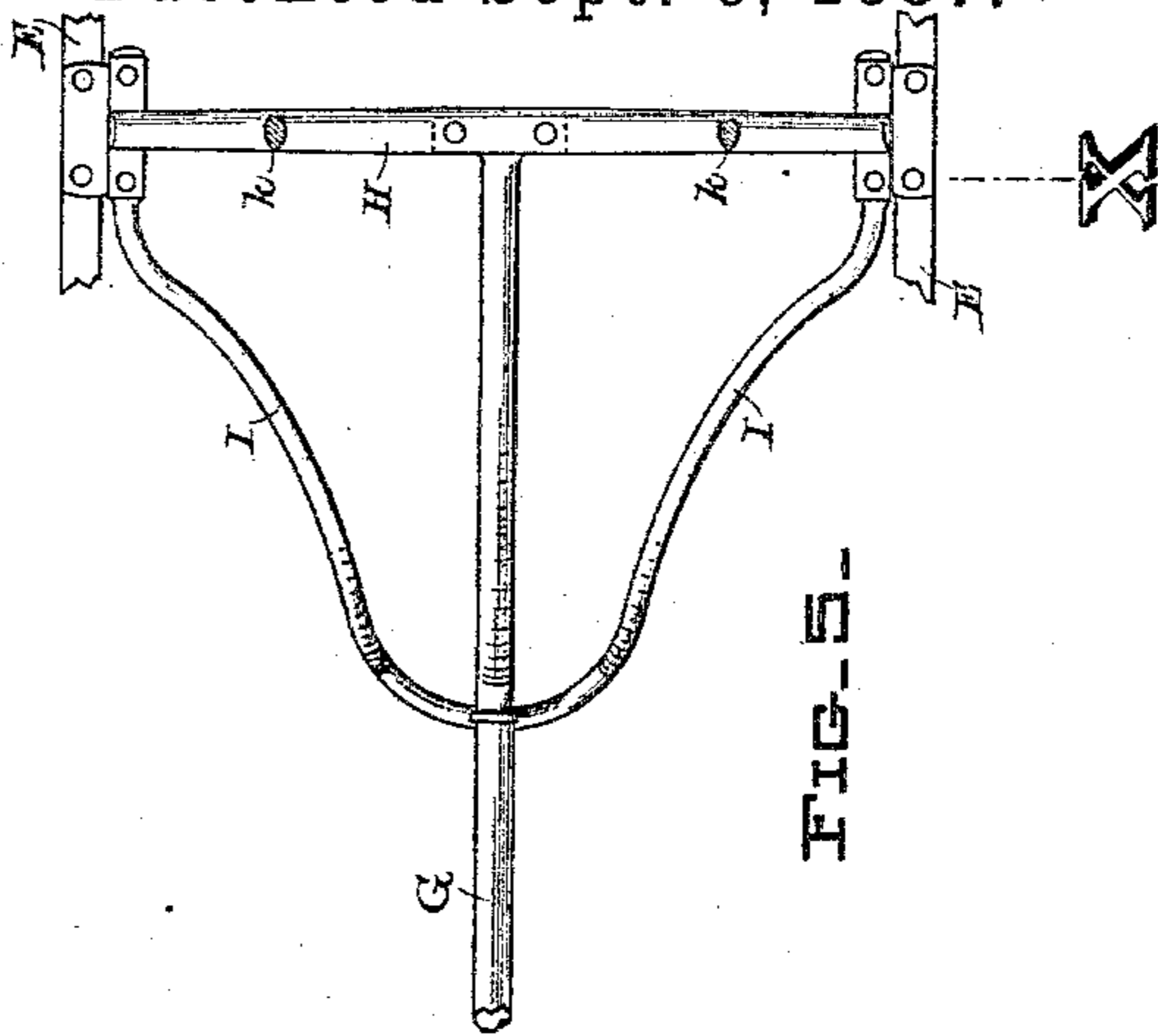


FIG. 5.

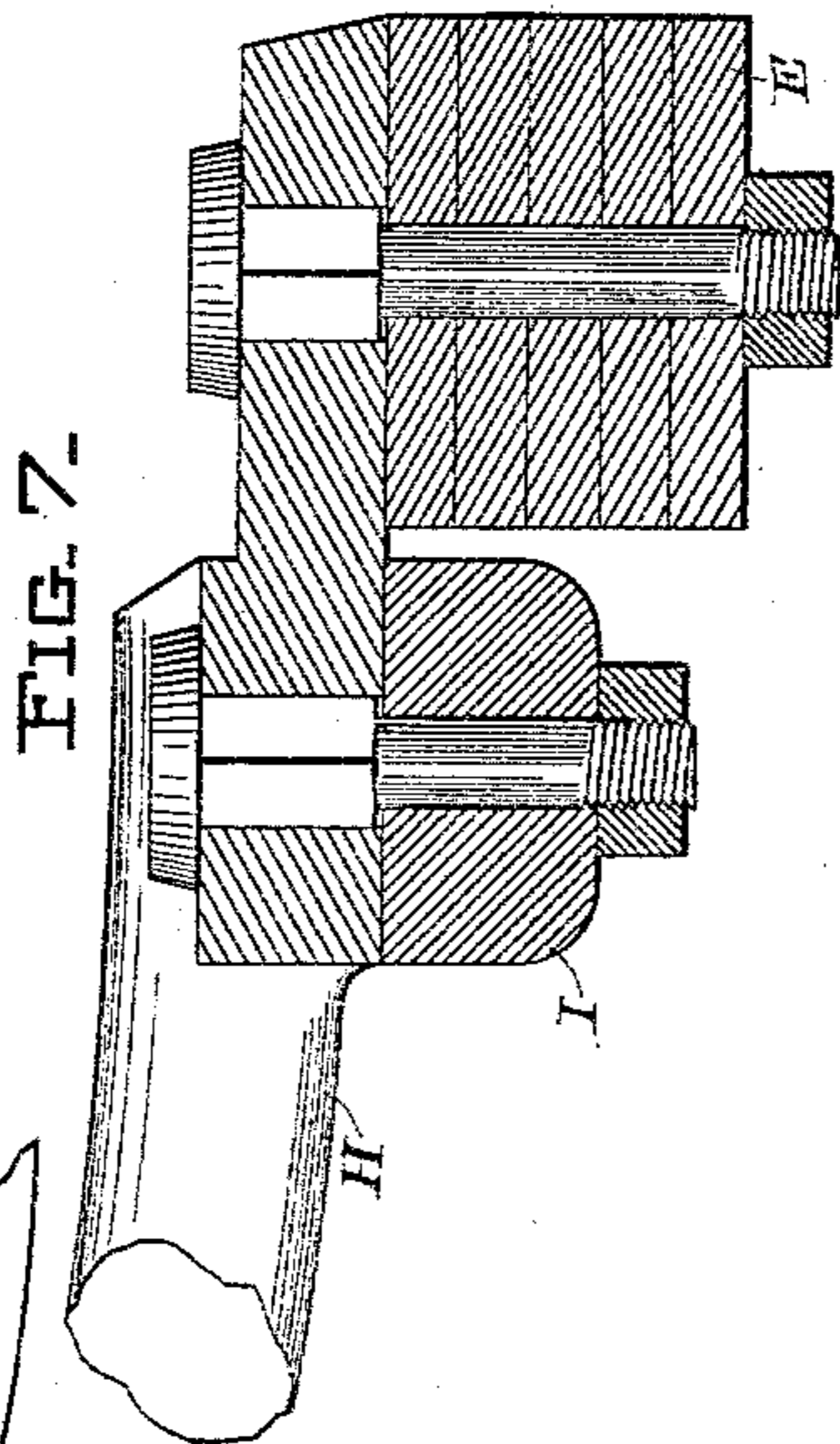


FIG. 7.

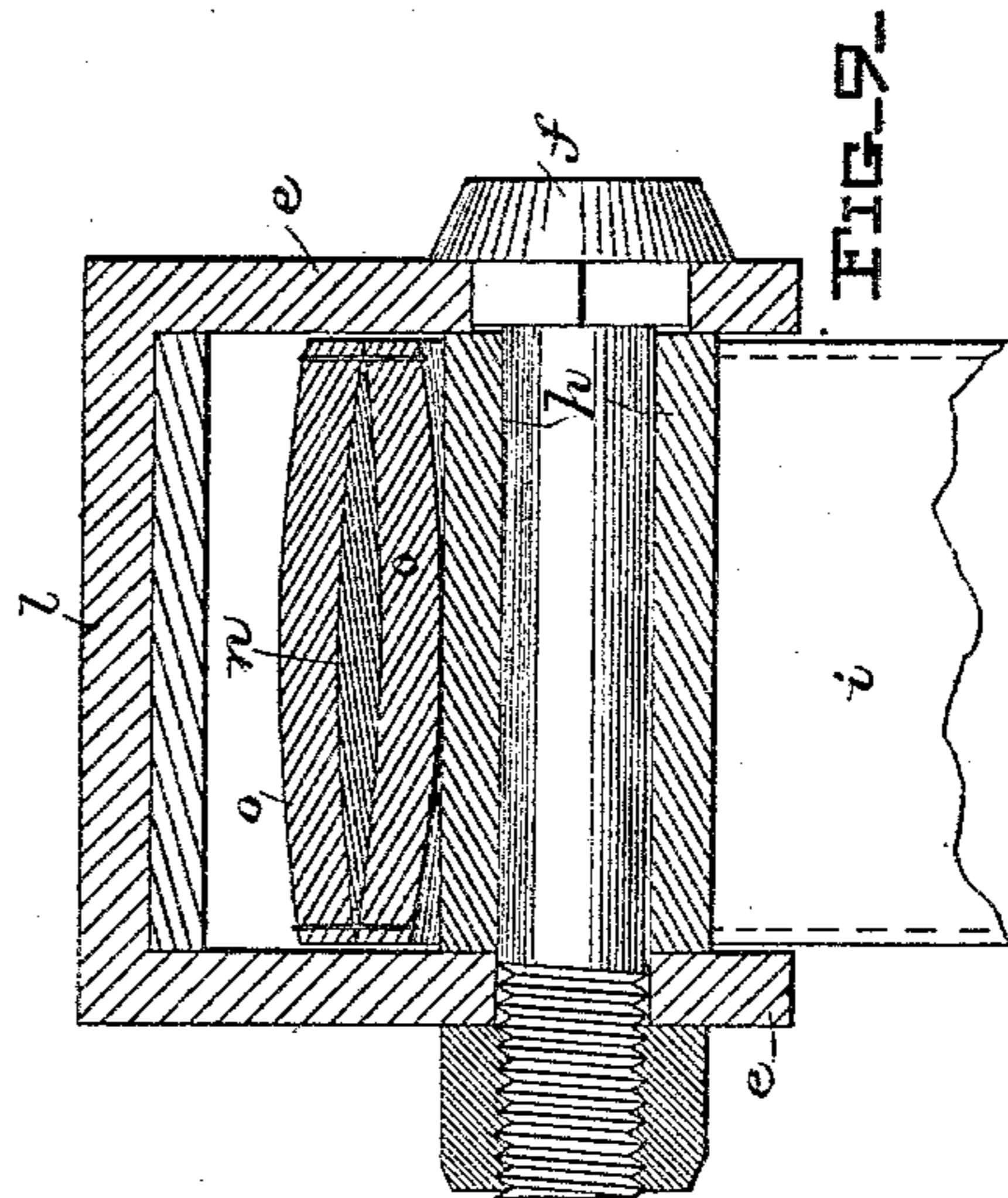


FIG. 9.

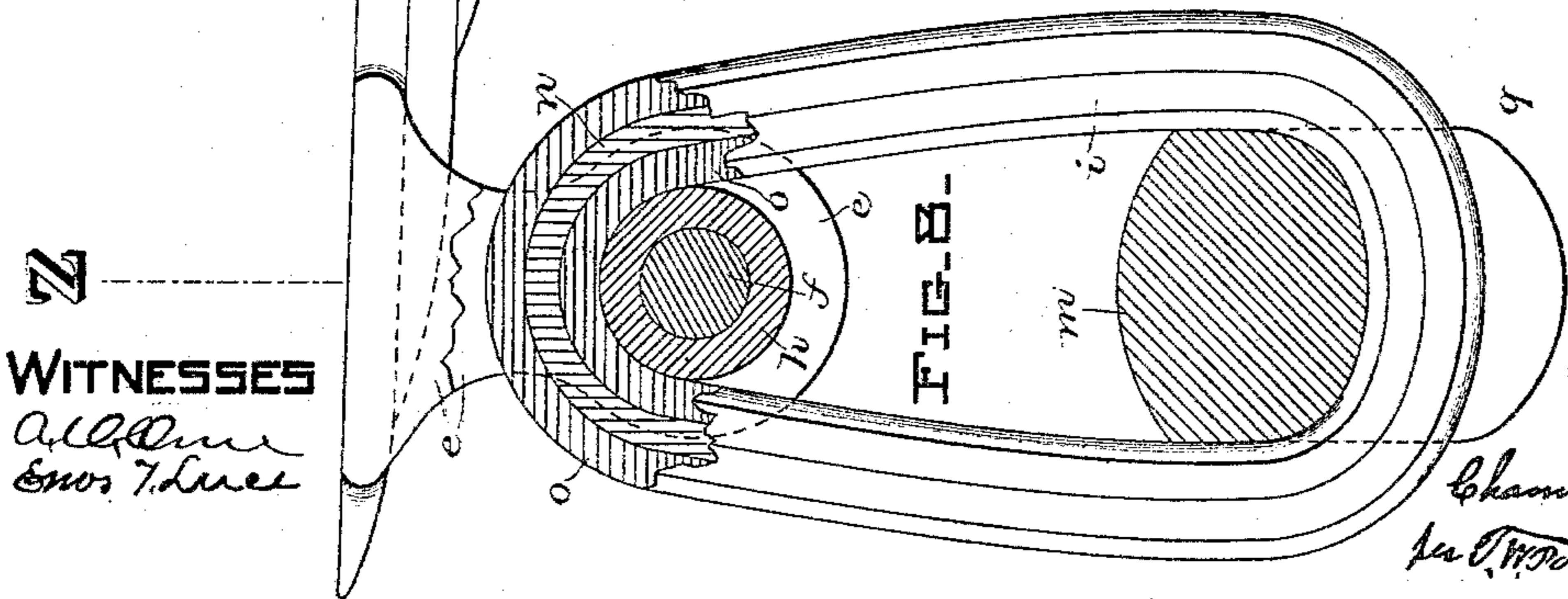


FIG. 8.

WITNESSES
Allen
Enos

INVENTOR

Charles Thomas
per J. W. Porter Atty.

UNITED STATES PATENT OFFICE.

CHAUNCEY THOMAS, OF BOSTON, ASSIGNOR OF ONE-HALF TO LEONARD B. NICHOLS, OF CAMBRIDGE, AND J. CUSHING THOMAS, OF BOSTON, MASSACHUSETTS.

CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 369,370, dated September 6, 1887.

Application filed January 27, 1887. Serial No. 225,622. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY THOMAS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Carriages, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

This invention relates to road-carriages; and it consists in the construction and combination of divers devices embodied therein, as hereinafter more particularly and fully set forth and claimed.

In said drawings, Figure 1 is a side elevation of a coach embodying my invention. Fig. 2 is a view like Fig. 1, except that the "perch" or "reach" is at its front end connected with the body instead of with the fifth-wheel and the front of the body rests upon the fifth-wheel direct instead of in loops. Fig. 3 is a rear elevation of Fig. 1. Fig. 4 is a front elevation of Fig. 1. Fig. 5 is a detached top plan view of the rear portion of the perch and portions of the rear springs and the spring-bar of Fig. 1. Fig. 6 is a detached top plan view of the perch and a portion of the rear springs and the spring-bar shown in Fig. 2. Fig. 7 is a detached sectional elevation, the section being taken through a rear spring, the spring-bar, and the perch, as on line *x x*, Figs. 5, 6. Fig. 8 is a sectional elevation showing the method of suspending the body of the carriage by means of loops. Fig. 9 is also a detached section for the same purpose as Fig. 8, and is taken as on line *Z*, Fig. 8.

In said views, A represents the body, which may be of any desired style or form, as its intended use may render advisable. B B are the wheels; C, the hind axle; D, the front axle; E, the hind elliptic springs, secured on hind axle, C; and F are the front elliptic springs, secured on front axle, D, which parts may be of such form and proportion as the style and size of the vehicle renders advisable.

My invention relates to the suspension and support of body A upon the springs, and to this end, when my improved suspension is to be applied to both the hind and front ends of the body, I employ the perch G, of suitable curva-

tures and attached at its rear end to spring-bar H and there provided with brace-stays I I, while its front portion is secured to circle *a* of the fifth-wheel, at the front and rear of the circle and to the sides thereof, by lateral arms *b*, which extend from the perch, the fifth-wheel being supported upon front spring-bar, J, and futchells *c*, in a well-known manner, as shown in Figs. 1 and 4. At the junction of arms *b* with the perch is seated and secured the semi-elliptic spring *d*, the ends of which are formed with ears *e*, (enlarged, Figs. 8, 9,) having a bolt, *f*, provided with sleeve *h*, to receive and sustain the body-suspending loop *i*. A pair of hanging irons, *g*, being secured to body A on opposite sides of spring *d*, and at each end thereof, and by their bolt *j* passing through loop *i*, serve to support the front end of the body.

Upon the hind spring-bar, H, is formed an open raised bracket, *k*, on which is secured the semi-elliptic spring *l*, the ends of which are formed with ears *e* to receive bolts *f*, on which are supported loops *i*, in which are seated the rearwardly-projecting hanging irons *m* of the body, the spring *l*, its ears *e*, and bolt *f* being as shown in Figs. 8, 9, and irons *m* serving the same purpose as hangers *g* and their bolt *j*. The loops *i* are formed, in a well-known manner, with an interior loop, *n*, of metal, and an external covering, *o o*, of leather, united at the edges by stitching, as shown, which renders the loops non-expansive and noiseless, and the pivot-bolts *f* of cross-springs *d l*, on which the loops are supported, as also the body-supporting bolts *j* and hanging irons *m*, being arranged with their axes in the fore-and-aft direction of the carriage. Therefore the loops have a free lateral swinging movement upon their supports, as laterally-operating forces may impel the carriage-body.

Instead of suspending the front part of the body upon loops, as shown in Figs. 1, 4, the front of the body may—for purpose of lightness, which is sometimes very desirable—be connected by means of the fifth-wheel and king-bolt with spring-bar J, thus dispensing with the cross-spring *d*, as shown in Fig. 2; and to support the rear of the body in the loops in such case, as already described, the perch

will be formed with the two parts I', to extend from spring-bar H to bar *p*, to which they are pivoted, as shown in Fig. 6, thus constituting a "shear" perch, said bar *p* being secured
 5 beneath the body by means and in manner as shown in said Figs. 2 and 6, and when thus constructed and arranged the rear loops and rear portion of the body have free lateral swinging movement, as the body vibrates freely
 10 upon the king-bolt as its forward pivot.

The hanging irons *m* are shown in Figs. 1, 2, and 8 as formed with downwardly-projecting lugs *q*, between which the loop *i* is seated. The details of construction may in many re-
 15 spects be varied from those shown in the drawings without departing from the essential feature of my invention, which consists in so constructing and arranging the parts that the axes of the supports of the loops that sustain one
 20 or both ends of the body are in the line of movement of the vehicle, thus allowing a lateral swinging movement of the loops as the sidewise swaying of the body impels them.

I claim as my invention—

25 1. In a vehicle, the combination of cross-spring *l*, supported by the hind axle, the hanging irons *m*, rigidly secured to the body and projecting from the rear thereof, and loops *i*, suspended upon pivot-bolts *f*, arranged in said
 30 spring with their axes in the fore-and-aft line of the body and with said hanging irons supported in said loops, substantially as specified.

2. In a vehicle, the combination of cross-spring *d*, supported by the front axle, the hang-
 35 ing irons *g*, rigidly secured to the body and

projecting laterally therefrom on each side of said spring, and loops *i*, supported upon bolts *f*, arranged in said spring with their axes in the fore-and-aft line of the vehicle, and sup-
 40 porting the body by means of said hanging irons, substantially as specified.

3. In combination with the body and under work of a vehicle, the loops *i*, supported upon pivots arranged in the under work, with their
 45 axes in the fore-and-aft line of the vehicle and the body supported in said loops by irons rigidly secured to the body and projecting from the rear thereof, substantially as specified.

4. The combination of body A, a perch connected at its rear end with the spring-bar and
 50 at its front end with the fifth-wheel, and loops *i* at the four corners of the body, supported upon pivots arranged with their axes in the fore-and-aft line of the vehicle and above said perch and held in position thereby, and with
 55 hangers extended from the body and supported in said loops, substantially as specified.

5. The combination of body A, the perch secured at its rear end to the spring-bar and
 60 at its front to the body, and loops *i* at the rear corners of the body, supported upon pivots arranged with their axes in the fore-and-aft line of the vehicle and above said perch and held in position thereby, and hangers extended
 65 from the body and supported in said loops, substantially as specified.

CHAUNCEY THOMAS.

Witnesses:

T. W. PORTER,
 ENOS T. LUCE.