

(No Model.)

3 Sheets—Sheet 1.

A. K. FELTON.
CONVERTIBLE CARRIAGE.

No. 292,001.

Patented Jan. 15, 1884.

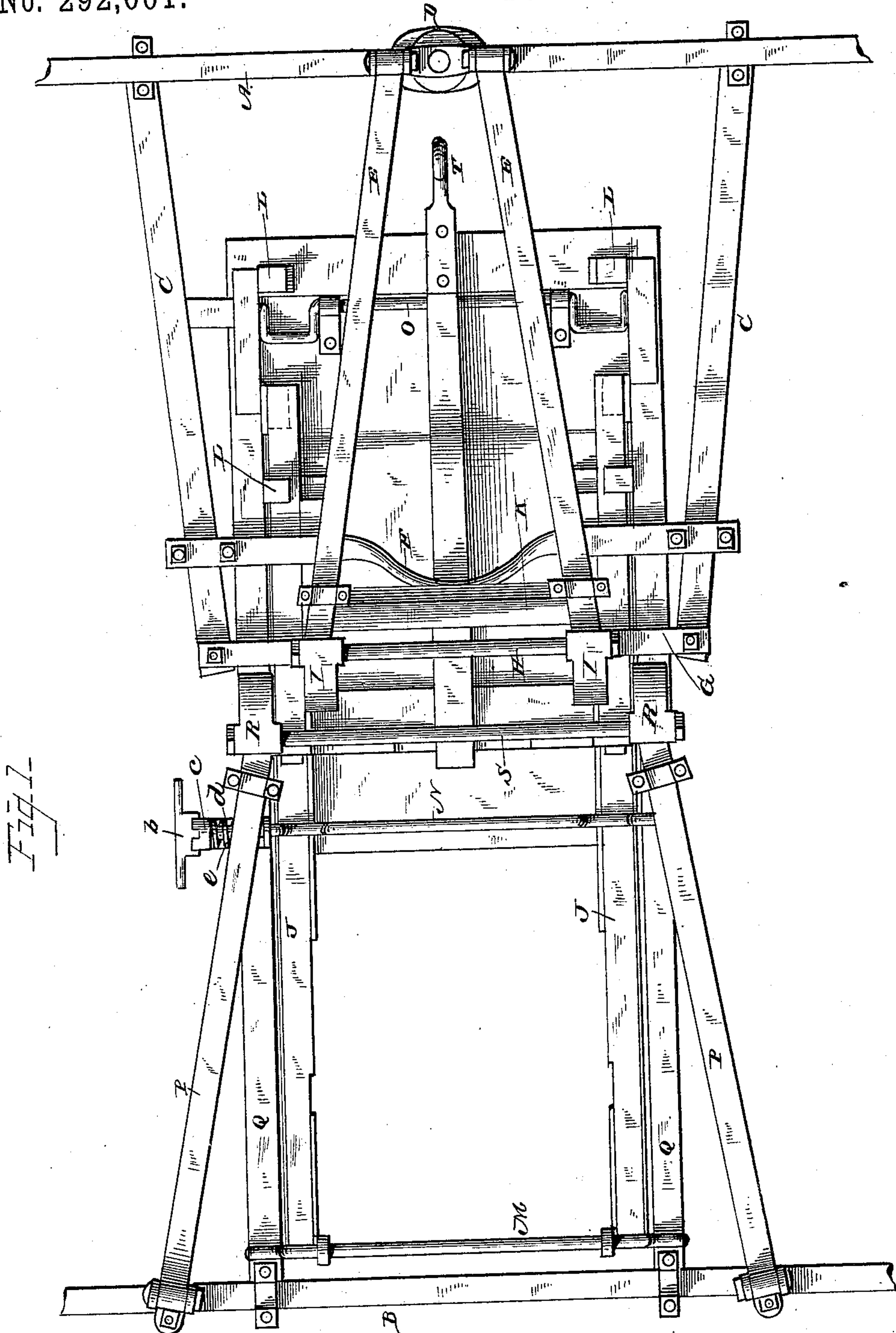


FIG. 1.

WITNESSES

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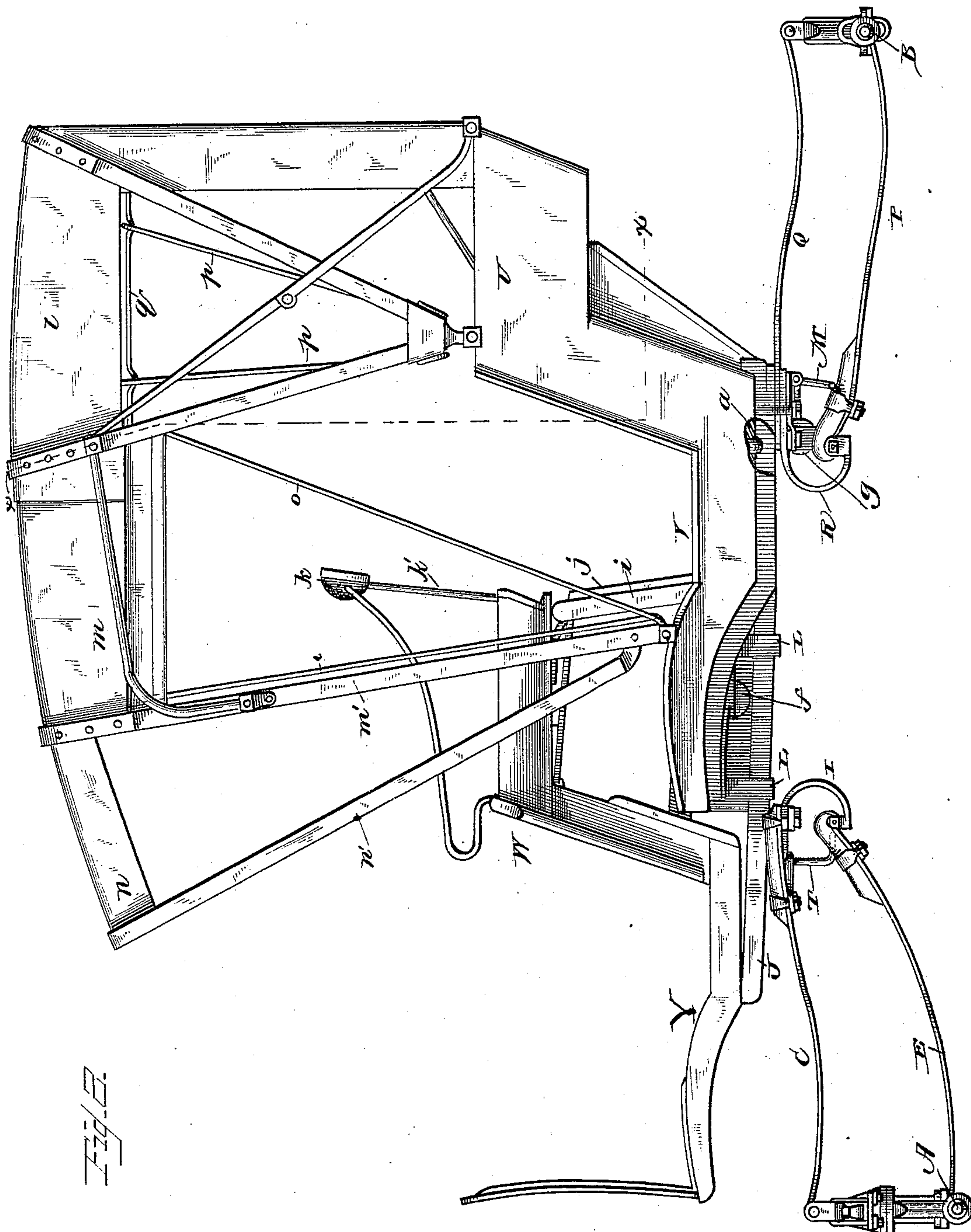
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3 Sheets—Sheet 3.

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Fig. 3

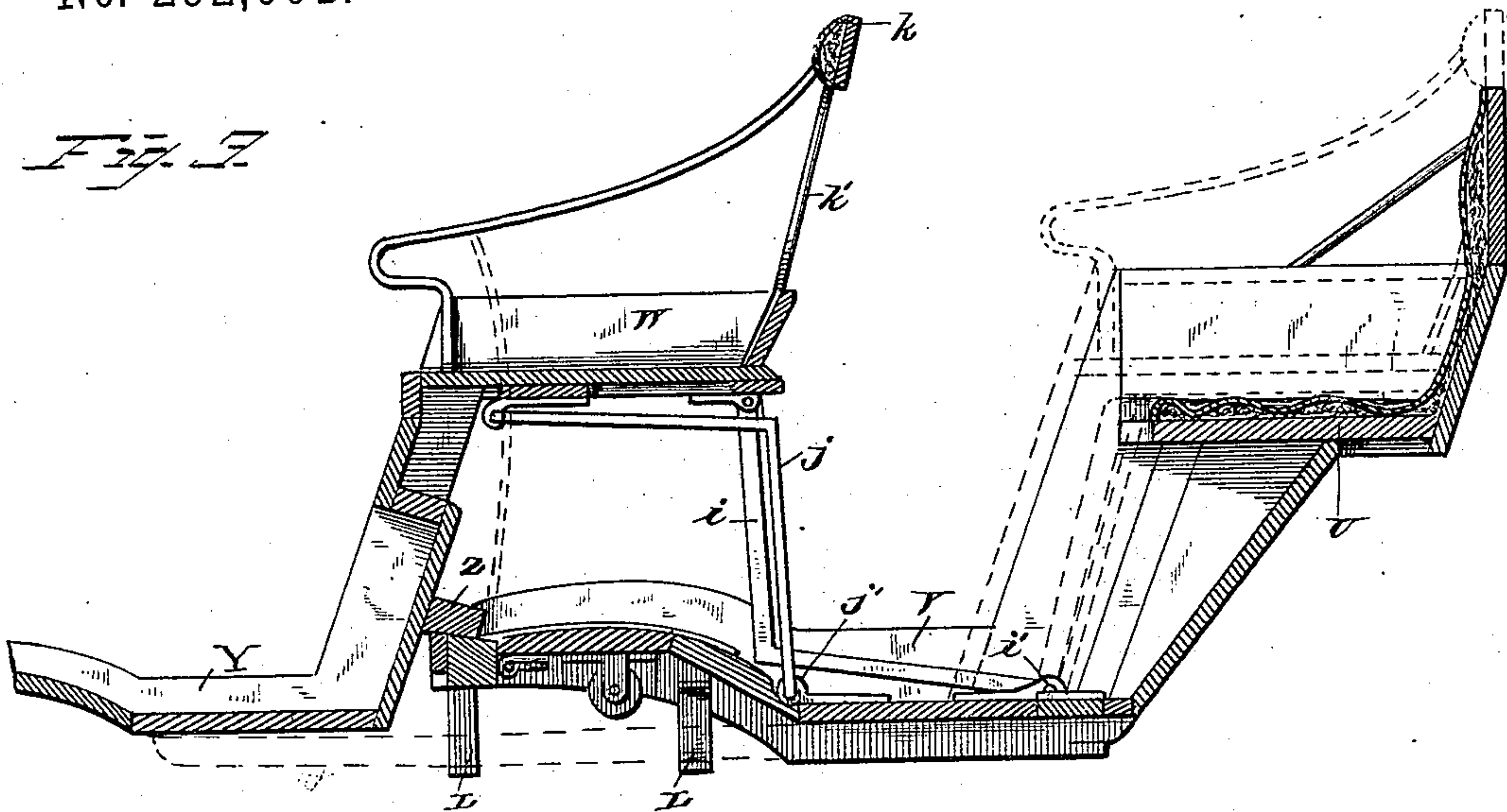
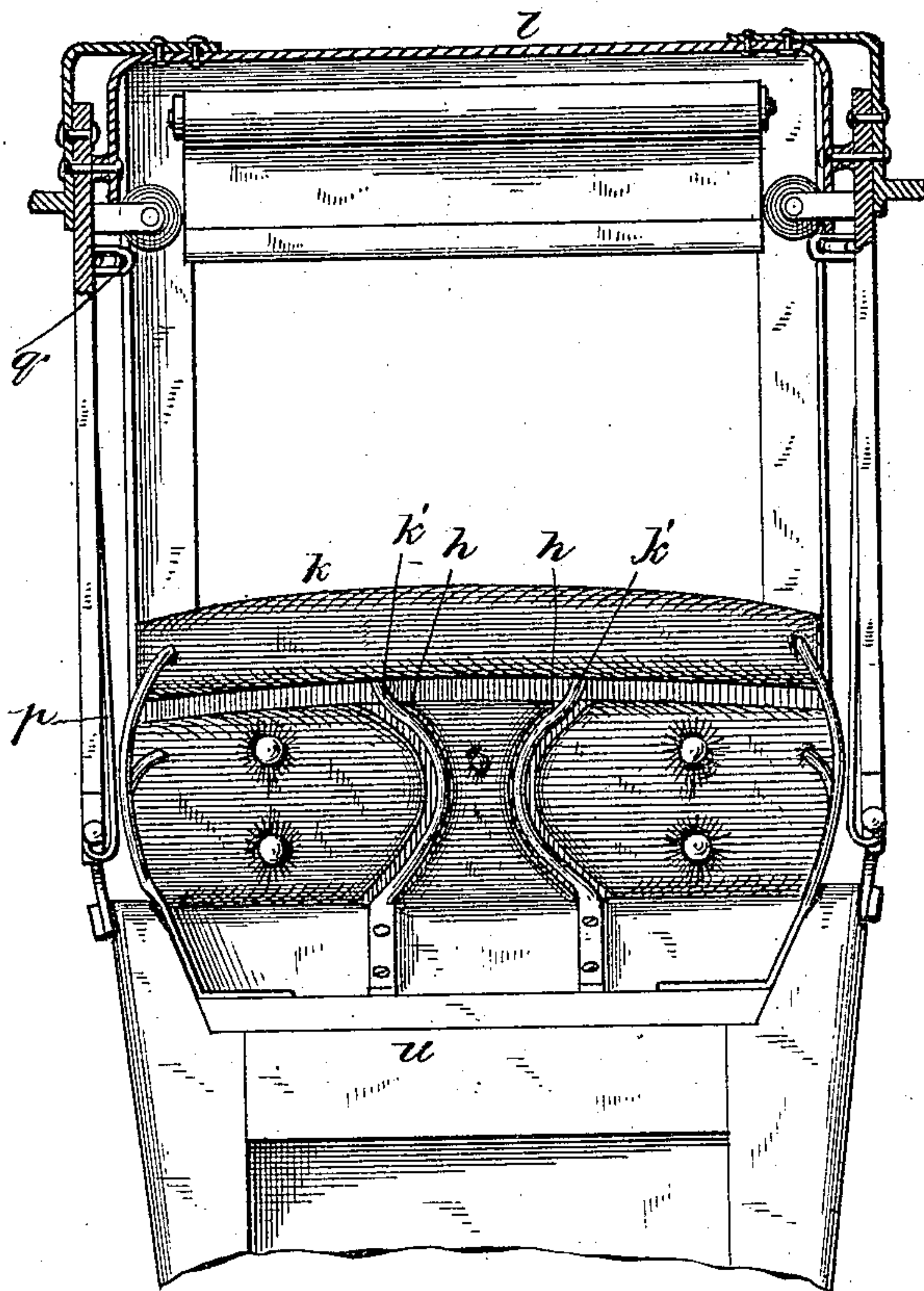


Fig. 4



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UNITED STATES PATENT OFFICE.

ANTHONY K. FELTON, OF STOYESTOWN, PENNSYLVANIA.

CONVERTIBLE CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 292,001, dated January 15, 1884.

Application filed November 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY K. FELTON, a citizen of the United States, residing at Stoyestown, in the county of Somerset and State of Pennsylvania, have invented certain new and useful Improvements in Convertible Carriages, of which the following is a full, clear, and exact description.

This invention is in the nature of improvements in that class of carriages which, by capabilities of extension or folding, may be converted from a one to a two seat vehicle without in either position evidencing any marked peculiarities of construction.

My improvements consist, first, in the running-gear made adjustable for adapting the springs to a one-seat or a two-seat vehicle; second, in the body made of two parts—one hinged to the other and folding into it, and then having the appearance of a single-seat structure, and extensible into a two-seat structure, evidencing nothing of its adaptability for such conversion; and, finally, in an extensible or adjustable top for such convertible carriage, all and severally as hereinafter specifically set forth and claimed.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a bottom plan view of my running-gear in the one-seat position. Fig. 2 is a side elevation, on a smaller scale, of the carriage extended, the wheels being omitted, as they form no part of this invention. Fig. 3 is a longitudinal vertical section of the extended body, taken in a plane on the near side of the center; and Fig. 4 is a partly-sectional elevation in the plane of the line *x x*, Fig. 2.

A indicates the front and B the rear axle, which may be of any usual construction. To the top of the front axle-bolster are clipped converging half-springs C, and between these springs, and attached to the under side of the fifth-wheel D, are diverging springs E E. The springs C are connected by transverse braces F G at their other or inner ends, and the springs E E are secured at their inner ends to the squared ends of a rod, H, and this rod is sustained in curved hangers I, attached fast to timbers J. The springs E are also, at their inner ends, connected by a brace, K. Thus, while these springs C and E may be resilient

at their inner ends, they are rigidly secured against turning independently. The timbers J extend longitudinally of the body, are well ironed, and are connected to and slide beneath the body by means of hangers L. They are moved by the movement of the front axle and the connection of the springs therewith. The rear ends of these timbers are united by the rod or bar M projecting beyond each. When the parts are in the position shown in Fig. 1, they are so held against displacement by projections *a* from the body entering notches in the timbers J J, which are held in place by a cranked rod or eccentric, N, working against the said timbers, and having its bearing in the immovable support of the rear springs or in the body proper. This rod is operated and held in position by a handle, *b*, engaging one or the other of two notches, *c*, in a bracket, *d*, said handle being held in said notches by and released from them against the spring *e*, the handle being fast to the rod, and the spring acting against a shoulder on the rod, the rod being moved longitudinally to release the handle. A similar eccentric, cranked, or cam rod, O, at the front of the carriage-body is used to brace or stiffen the connection of the body and the timbers J J and hook T when the carriage is extended, as in Fig. 2. The rear end of the carriage is supported by fixed springs P P and Q Q, the former extending from clips below the rear axle to irons or hangers R, fast beneath the body, and the latter from clips above the axle to the body, and they may be fastened to the body by the clips holding the irons R, and the springs P P are connected with the irons R by a squared-end rod, S, and nuts. The rods H and S of the pairs of springs E E and P P, respectively, serve to connect said pairs of springs, and also to prevent side motion of the vehicle, the two springs of each pair thus moving together.

When the carriage is contracted, with a single seat only in use, the eccentric N is turned up against the timbers, to insure the projections of the body staying in the notches in the timbers. The cranked rod O is inactive. The cross-rod M is also inactive, and practically only the upper springs, C C and Q Q, are in use in supporting the body. Now, when the carriage is to be extended, and the springs

changed from the position indicated in Fig. 1 to that shown in Fig. 2, the eccentrics N O are turned free, the back of the body raised to clear the projections *a* of the notches, and the front axle pulled in a forward direction, carrying with it the springs C E, timbers J, and rod or bar M; and in order to make this play easy the body is supported on the timbers by rollers *f* at the front, and is further provided with suspended rollers *g* at the rear, bearing up against the under side of the said timbers. When the timbers J advance they enter the forward brackets, L, which sustain them, and when they have reached their foremost position the eccentric O is turned down against them, to insure the engagement of the retaining or coupling hook T with the cross-bar F, in which position said hook is further supported by the cross-bar K. The forward movement of the timbers J J brings the cross-bar M into engagement with the lower pair of rear springs, and throws some of the weight of the extended vehicle upon them, and so also the hook T, bearing upon the lower pair of front springs, brings them into play. Thus all of the springs are brought into active play in the support of the extended carriage, while only the two upper pairs of springs are active in supporting it when contracted. I have thus a four-spring vehicle for one or two persons, and an eight-spring vehicle for more than two persons, thus increasing the power with the weight.

Referring to Figs. 3 and 4, I will now describe the body. The rear fixed seat, U, has a cushioned back, provided with countersunk portions *h*, to receive the irons of the front seat, and said seat is arranged in the main body portion V. To the floor of this portion are hinged angle-irons *i j*. The irons *i* are preferably two in number, one at each side of the body, and hinged to the floor at *i'* by their horizontal member. The iron *j* is arranged between the irons *i i*, and is hinged to the floor at *j'* by its vertical member, and in advance of the hinges *i'* by the distance of nearly the length of the vertical member. The front seat, W, is connected by a hinge-joint at its rear under side to the vertical members of the irons *i i*, and similarly at its front to the horizontal member of the iron *j*. This seat W is provided with a floor, Y, which, when extended, is on a level with the floor of the body V, and which, when folded, fits within said body. Z is a stop-block on the under side of the floor Y to engage the front edge of the body V when the carriage is extended. These angle-irons are in substance and effect hinges for the front seat, and in operation they permit the seat to be moved back and lift it in such movement onto the rear seat, where it rests and is supported when a one-seat carriage is desired; and in order to make the carriage as far as possible in appearance a single-seated carriage the back *k* of the front seat moves and fits over the back of the rear seat, and its irons *k'* fit into the depressions *h* of

the upholstering of the back seat, thus also adding to the comfort of the occupant. When the front seat is thrown forward it is on a level with the rear seat, and to accomplish this the irons *i j* operate somewhat as toggles or elbows.

The top consists of an ordinary falling section, *l*, a section, *m*, falling within the part *l*, and a third section, *n*, telescoping into the part *m*. The section *m* is provided with the bow *m'*, jointed near the front of the body V, and the section *n* has the bow *n'* jointed to the bow *m'*. The section *n* telescopes within the section *m* freely at any time, and it and the section *m* rise and fall with the section *l*. The curtains, which may be of any approved construction, are arranged within the top instead of outside, and cover the sides when pulled down, and are confined when down by guard-rods *o p*, sprung into notched rods *q*, one such in each section, from which notches the guard-rods have to be displaced to permit the falling of the top.

Now, while I believe I have described the best mode of carrying my invention into practice, I wish it understood that parts may be changed or replaced without departing from the principles thereof, as hereinafter particularly set forth in the claims.

The timbers J J and their cross-bar M constitute a coupling for the front and rear members of the running-gear.

What I claim is—

1. The combination, substantially as shown and described, of the front springs connected more or less immediately with the front axle, longitudinally-movable timbers connected to a fixed carriage-body and carrying the said springs, fixed rear springs, and means to lock the parts in position, as and for the purpose set forth.

2. The springs C C, clipped more or less directly over the front axle, and the springs E E, attached beneath the fifth-wheel, the transverse braces F G, connecting springs C C, the braces H K, connecting springs E E, the irons I, connecting springs C C and E E, and the movable timbers J J, to which said irons are attached, combined with fixed rear springs, and a convertible or extension body, substantially as described.

3. The combination, with longitudinally-moving timbers borne by and supporting a fixed extensible body, of the fixed rear springs, the independent front springs connected and moving with the timbers and front axle, and locking-rods to engage and hold the springs and body in proper relative position, substantially as shown and described.

4. The combination, with an extension-body and longitudinally-moving timbers borne by and supporting such body, the fixed rear springs, the independent front springs connected and moving with the timbers and front axle, a cross-bar connecting the rear ends of the timbers, and resting upon the lowermost of the rear springs when the carriage is ex-

tended, and means, substantially as described, to lock the springs and body in proper relative position, as and for the purpose set forth.

5 5. The combination, with an extension-body, fixed rear springs, movable front springs, and a longitudinally-moving coupling member, to which the front springs are attached, of pulleys bearing upon the upper and lower faces of such coupling member, and eccentric or
10 cranked rods for holding the body and coupling member in proper relative position to each other and to the springs, substantially as described.

15 6. The combination, with an extension running-gear, of an extension-body composed of a fixed body and seat, and a movable body and seat hinged within the fixed body, and movable bodily into and from the fixed body, substantially as described, and for the purpose
20 specified.

7. The combination, with the fixed body, of the angle-irons *i j*, hinged to the said body, and to a seat and body made movable thereby in said body to cover or uncover the body and
25 seat of said fixed body, to convert the carriage into a single or double seat vehicle, substantially as described.

8. The upholstered rear seat provided with depressions in its back to receive the irons of
30 the front seat, substantially as described.

9. The combination, with the fixed seat and body, of a seat and body in one, hinged to and movable within the fixed seat and body, to make of the carriage a single-seat vehicle, and movable forwardly from the same to bring the
35 seat and body into the horizontal planes of the fixed seat and body, respectively, to make a two-seat vehicle, substantially as described.

10. The combination, with an extension running-gear and extension-body, of a falling top
40 composed of telescoping sections, substantially as shown and described.

11. The combination, with the top sections, of the movable curtain-guards *o p q*, substantially as shown and described.
45

12. The combination, with the top sections, of the movable curtain-guards *o p q* and weather-curtains arranged inside the carriage-top, and arranged to pass down the guards to cover the sides of the carriage, substantially
50 as described.

In testimony whereof I have hereunto set my hand this 25th day of October, A. D. 1883.

A. K. FELTON.

Witnesses:

CHARLES H. FEMER,
JOSEPH BENDER.