(No Model.) 2 Sheets—Sheet 1.

F. H. HENRY.

CAR SEAT.

No. 461,198. Patented Oct. 13, 1891.

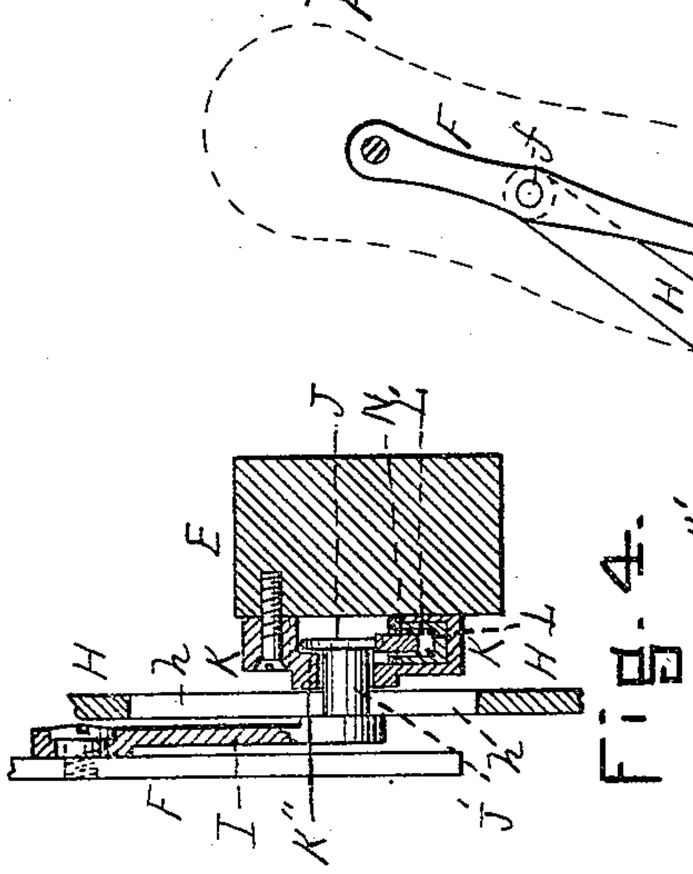

Fig. 4.

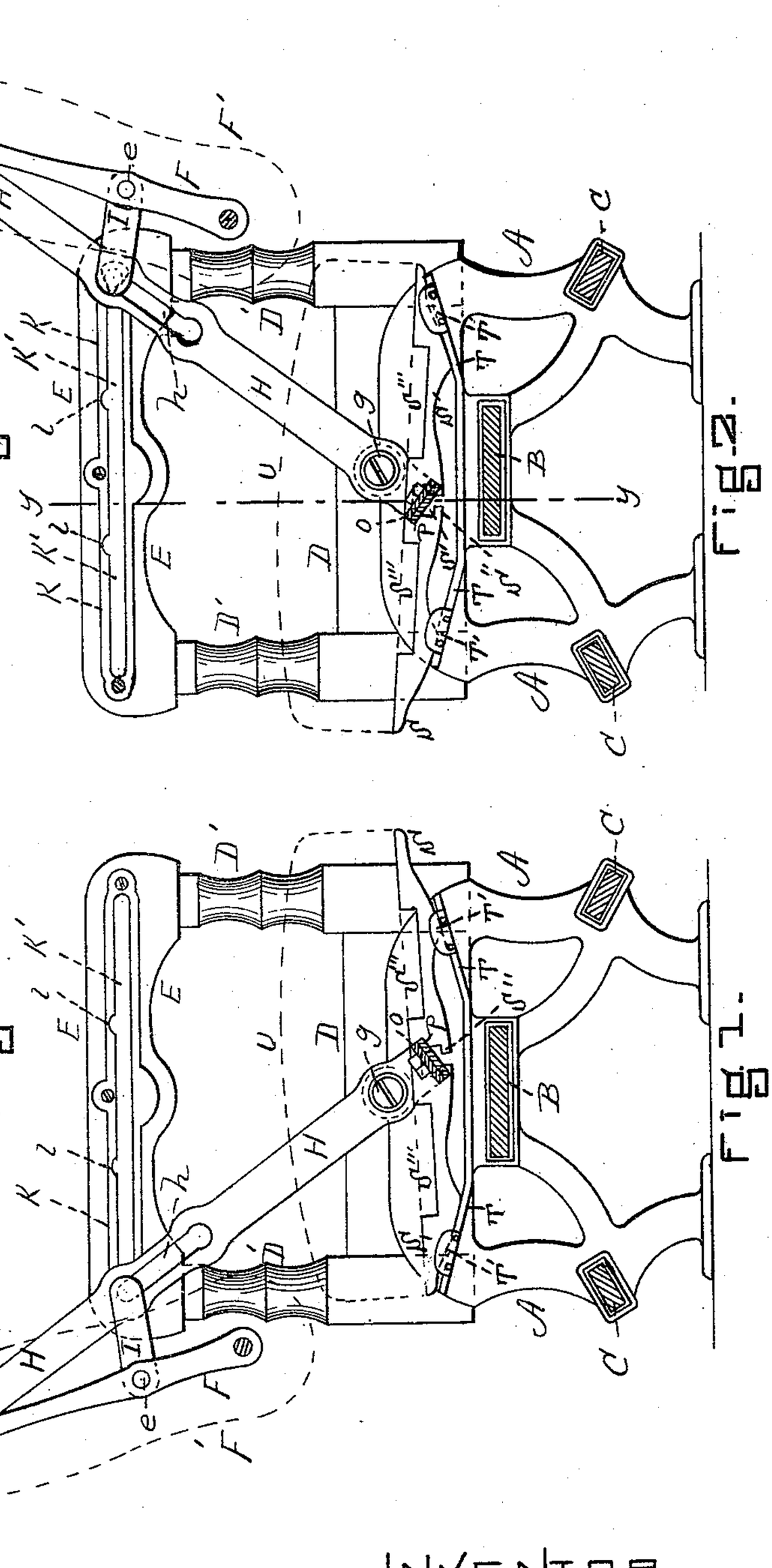

Fig. 2.

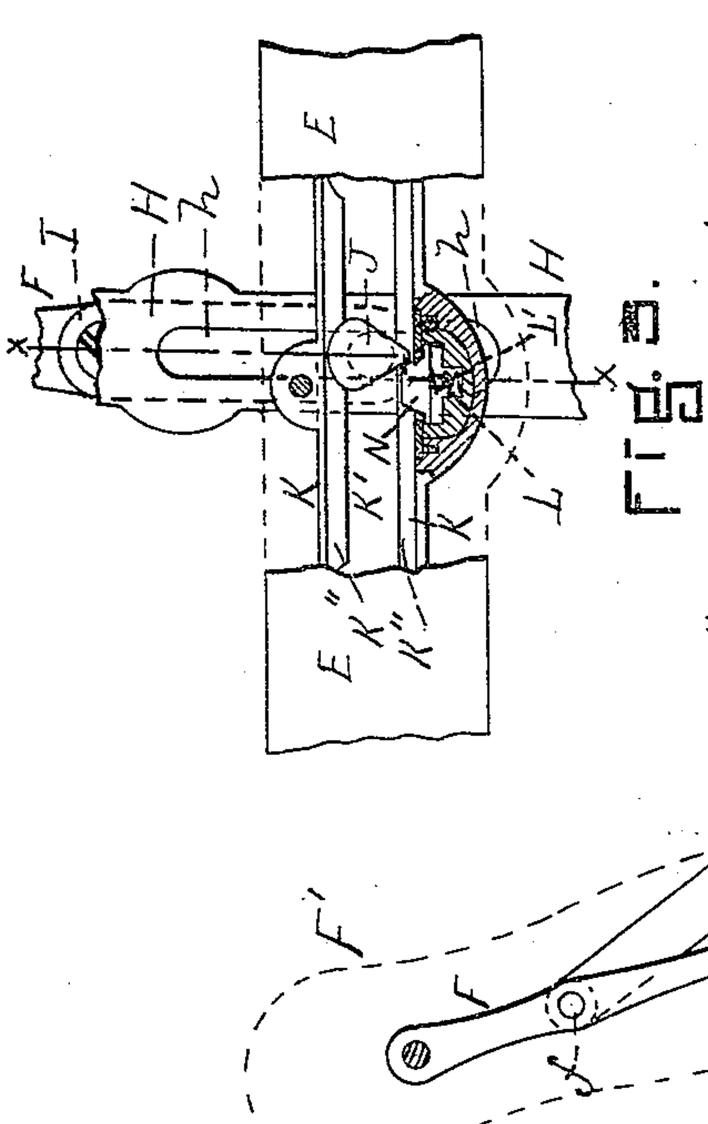

Fig. 5.

Fig. 1.

WITNESSES.

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By his Atty.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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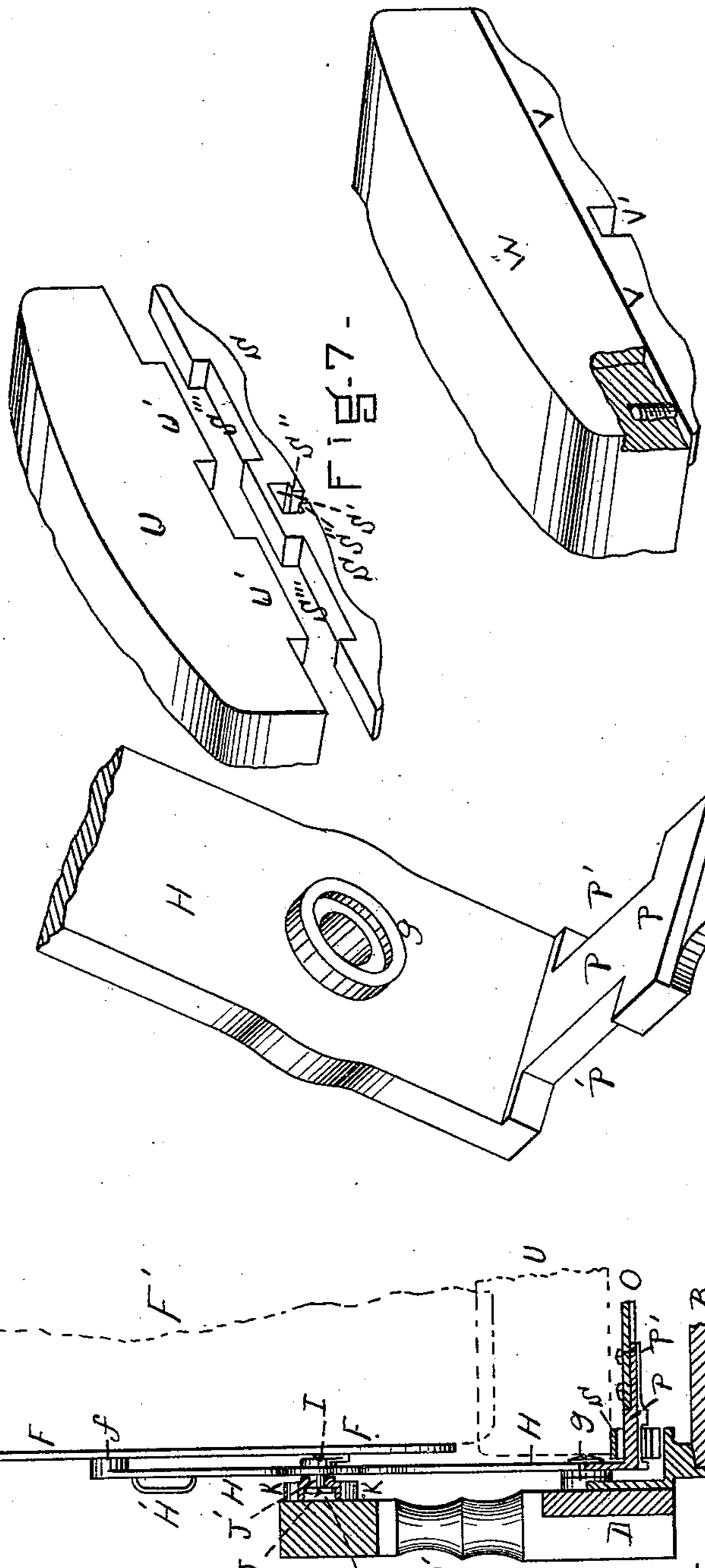

Fig. 1.

Fig. 2.

Fig. 3.

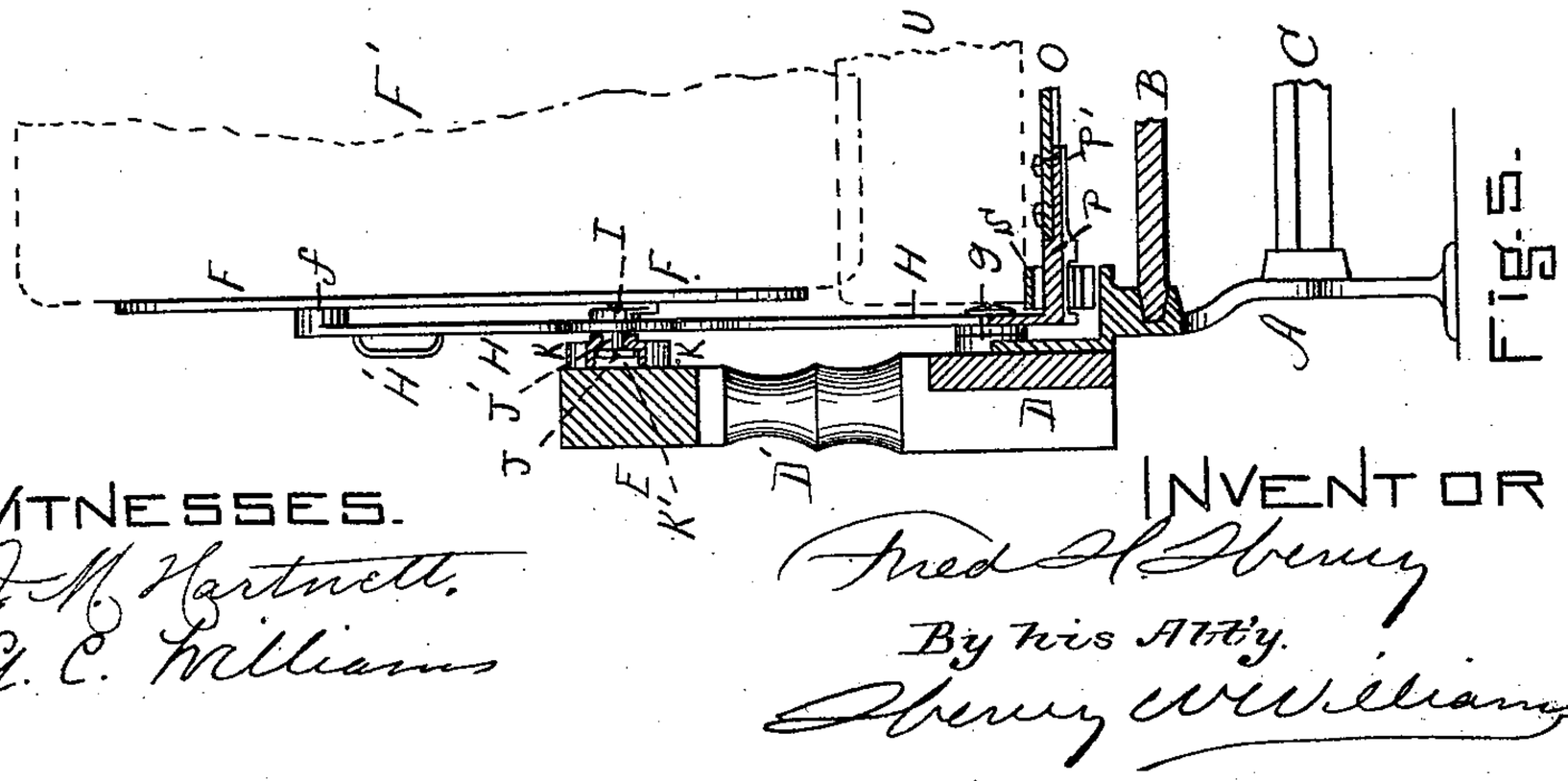

Fig. 5.

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UNITED STATES PATENT OFFICE.

FRED H. HENRY, OF WAKEFIELD, MASSACHUSETTS.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 461,198, dated October 13, 1891.

Application filed July 2, 1891. Serial No. 398,215. (No model.)

To all whom it may concern:

Be it known that I, FRED H. HENRY, of Wakefield, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Car-Seats, of which the following is a specification.

This invention relates to that class of car-seats in which the back swings over the seat from one side edge to the other without turning over, said back being upholstered on both sides for the purpose, and in which the swinging of the back from one edge to the other of the seat causes the cushion to move and tilt so as to be in proper position for the occupant.

The invention consists in the novel construction and combination of parts below described, whereby this style of car-seat is made more efficient and positive in its operation and at the same time simple and not easily put out of repair.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a cross vertical section of a car-seat embodying my invention. Fig. 2 is a similar section with the seat-back swung to the opposite side. Fig. 3 is an enlarged vertical section and elevation, the section being taken longitudinally through the seat-arm when the seat-back is in a nearly-vertical position, a portion of said seat-arm being represented as broken out. Fig. 4 is a section on line *x*, Fig. 3. Fig. 5 is a section on line *y*, Fig. 2. Fig. 6 is an enlarged perspective showing certain parts in detail. Fig. 7 is a detail in perspective, showing one of the slides or rockers and a portion of the frame of one of the cushions adapted to fit therein. Fig. 8 is a view of the same, showing a slight modification.

The back and seat are shown in broken lines in Figs. 1, 2, and 5.

A represents the uprights, secured to the floor and supporting the seat. B is the connecting-rail, and C the foot-rails, all constructed substantially as usual.

D D are the end rails or cross-pieces of the seat-frame, supported in the ordinary manner by the uprights A and supporting the posts D′, which support the seat-arms E.

F F are the end irons of the back F′. Pivotally secured at *f* to these ends F are the upper ends of the swinging arms H, which are fulcrumed near their lower ends at *g* to the end rails D. Each of these swinging arms H is provided with a longitudinal slot *h*, and the link I is pivoted at one end at *e* to the end iron F and at the other end is provided with a pin or projection J′, Figs. 4 and 5, which lies in the slot *h* and which is provided at its outer end with the tooth-segment J, Figs. 3, 4, and 5.

K is a horizontal plate or track secured to the inner side of the seat-arm, extending for nearly the length thereof and provided with the longitudinal groove K′. The pin or neck J′ is made long enough to extend not only through the slot *h*, but through the slot or groove K′, in which it is held by the tooth-segment J, which lies within the slot behind the shoulders K″, Figs. 3 and 4. The track is gouged out at *l*, so that the tooth-segment can be withdrawn by turning it, if desired, without removing the track from the seat-arm.

When the seat-back F′ is desired to be swung from one side of the seat to the other, one of the arms H is grasped by the handle H′, Fig. 5, and the arms swing on their pivots *g*, their upper pivoted ends carrying the upper portion of the seat-back, while the links I, sliding in the slots *h* by the action of the pin J′ in the grooved track K, carry the lower portion of the seat-back and, describing a crank motion, reverse its angle or incline from that shown in Fig. 1 to that shown in Fig. 2, and vice versa.

Of course each of the seat-arms E is provided on its inside with a track K, in which a mechanism as above described reciprocates.

The inner side of each track K—that is, the side next the seat-arm—is provided at its center, beneath the groove or slot K′, with a small chamber L, in which is vertically placed a spiral spring L′, which holds vertically up in the position shown in Figs. 3 and 4 a head or vertically-sliding block or plunger N, having inclined sides, as shown. This block N when in its normal position is sufficiently high for the lower end or tooth of the segment J to strike it as it moves along the inside of the track K. In operation when the seat-back is swung from the position shown in Fig. 2 to that shown in Fig. 1 the pin J′,

with its head or segment J, travels along the slot K′ and is at the same time gradually turned by the link I from the horizontal position shown in Fig. 2 to the vertical position shown in Fig. 3, in which position it reaches the block N. As the pin passes over the block, slightly depressing it, the segment or head is turned in the opposite direction, thus allowing the back of the seat to take the position shown in Fig. 1, in which position the segment is at right angles to that shown in Fig. 3 and exactly opposite to that shown in Fig. 2.

The lower ends of the arms H are provided with the inwardly-projecting horizontal extensions P, (see Figs. 5 and 6,) which are grooved on their opposite sides at P′ and which are bolted at P″ to the opposite ends of the horizontal connecting-bar O, so that the arms H are practically connected at their lower ends. At the opposite ends of the seat, beneath it, are sliding rockers S, which rest on the curved or bent supports or ways T, supported by the frame and provided with the flanges or guards T′. (See Figs. 1, 2, 5, and 7.) These rockers are engaged by the extensions P, which lie in the central opening S′, by means of the grooves P′, and are held therein by the projections S″. U is the seat-frame, provided at opposite ends on its under side with the tenons U′, which fit in the grooves S‴ on the upper surfaces of the rockers. Thus it will be seen that as the arms H swing or vibrate to move the seat-back F′ to the opposite side of the the seat the extensions P reciprocate the rockers S longitudinally, (transversely with the seat,) which slide or rock on the curved or bent ways T′, which are of shape to move the seat U from one incline to the opposite incline, as shown, as the back is moved from one side to the opposite side. The preferable shape of the surface of the ways J consists of a horizontal center and inclined sides, as shown. Hence by means of the handle H′ the seat-back and cushion are reversed with perfect ease and the proper inclinations produced in both.

In the modification shown in Fig. 8 the rocker V is rigidly secured to the seat-frame W and has a plain central groove V′, so that the extension P is not locked therein.

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

1. In a car-seat, the combination of the frame, the seat-back, a slotted arm whose upper end is pivoted to the seat-back and which is pivoted near its lower end to the frame, the seat-arm provided with a horizontal grooved plate or track, and a link pivoted at one end to the seat-back and provided at the other end with a pin or projection extending through the slot in the said arm and into the groove in said plate or track, whereby when the seat-back is swung from one side of the seat to the other the angle or inclination thereof is reversed, substantially as described.

2. The combination, with the frame, seat-back, slotted arm H, pivoted to the seat-back and the frame, and the link I, pivoted to the seat-back and provided with the pin or projection J′, extending through the slot in said arm and engaged by the track on the seat-arm, of the tooth-segment J on the end of said pin J′, the seat-arm and track thereon provided centrally with the chamber L, connecting with the groove in the track, and the head or plunger N, whereby the said tooth-segment is turned as it passes over said head or plunger, substantially as set forth.

FRED H. HENRY.

Witnesses:
HENRY WILLIAMS,
A. C. WILLIAMS.