

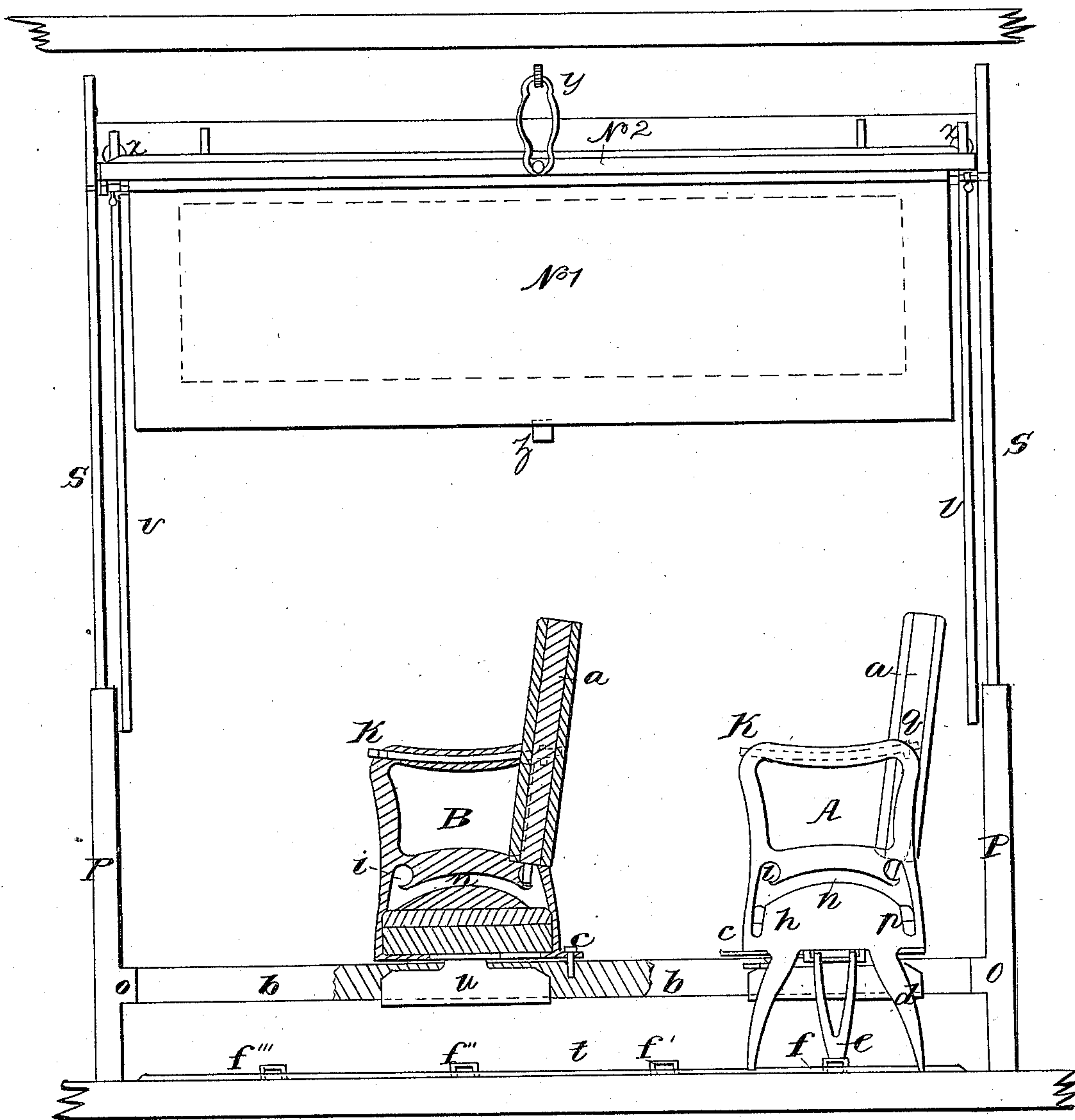
C. L. HARRINGTON.

Car Seat and Couch.

No. 21,070.

Patented Aug. 3, 1858.

Fig. 1.



Patented Aug. 3, 1858.

Technical drawing of a mechanical device, likely a printing press, showing a side view of the frame and internal components. The drawing includes labels: "No. 2" at the top, "S" in the center, "E" on the left, "a" in the middle, "b" at the bottom left, "c" at the bottom right, and "z" at the very bottom. A dashed line is visible in the middle section.

4 Sheets—Sheet 3.

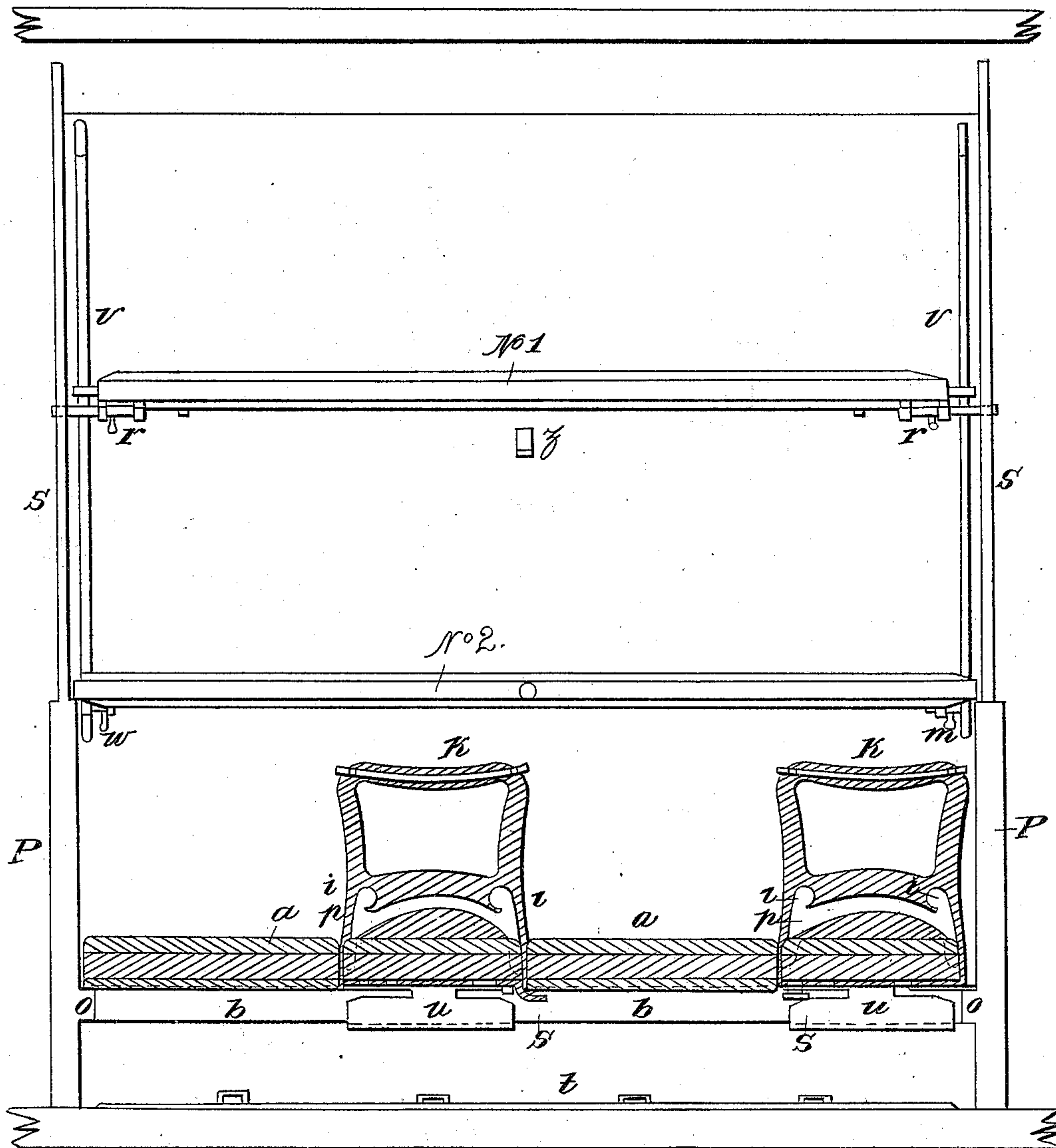
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Fig: 3.



4 Sheets—Sheet 4.

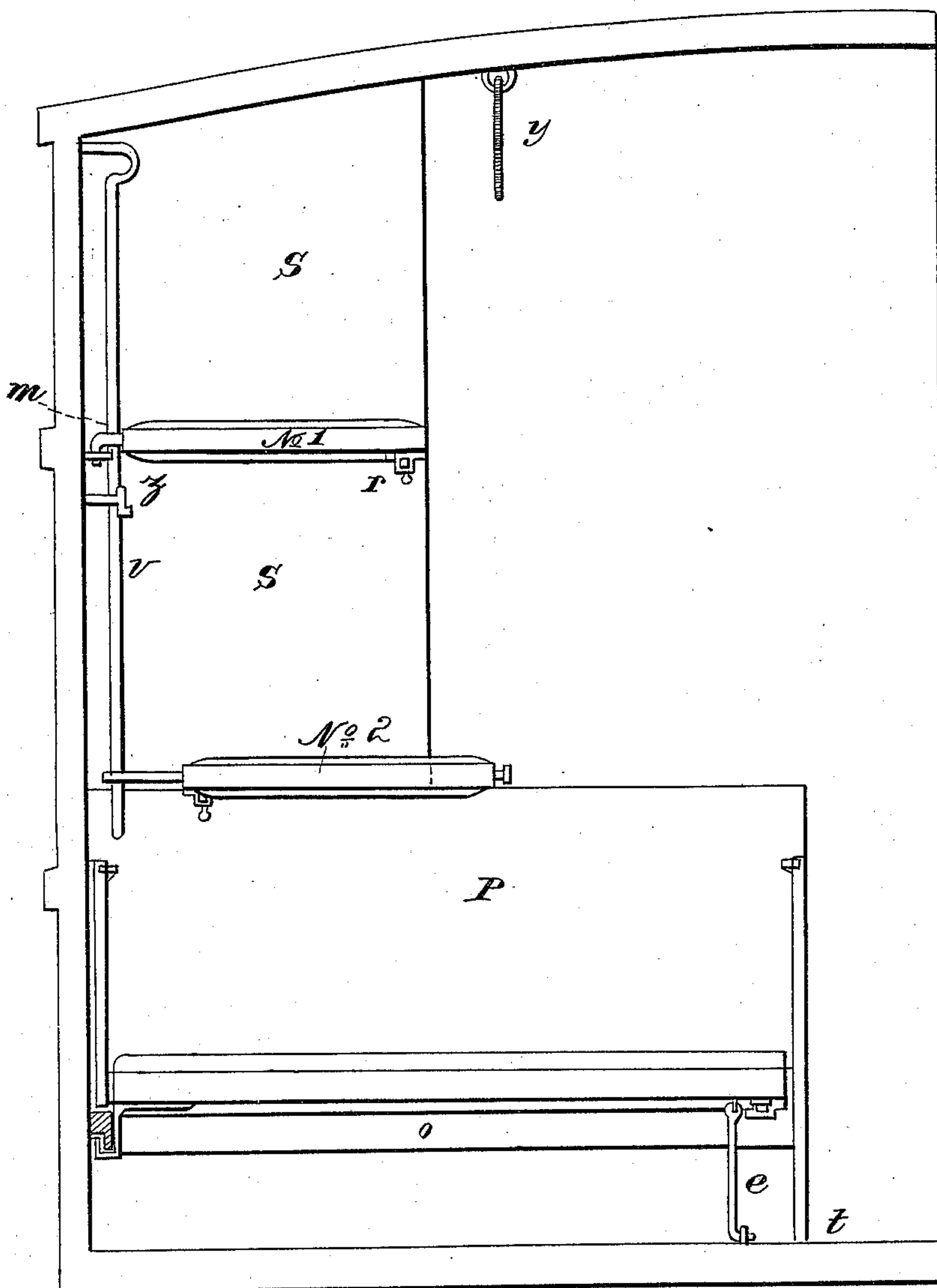
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Fig: 4.



UNITED STATES PATENT OFFICE.

CHARLES L. HARRINGTON, OF BUFFALO, NEW YORK.

IMPROVEMENT IN SLEEPING-CARS FOR RAILROADS.

Specification forming part of Letters Patent No. 21,070, dated August 3, 1858.

To all whom it may concern:

Be it known that I, CHARLES L. HARRINGTON, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Railroad Sleeping-Car; and I do hereby declare that the following is a full, complete, and exact description of the said invention, of its nature, character, and mode of use.

I divide the ordinary railroad-car into lateral divisions by permanent partitions of wooden cabinet-work, or such other material as may give sufficient strength to the partitions. These partitions are placed about six feet apart, and extend from the bottom to the top of the car, as represented by the Figure No. 1. The number of these partitions will vary of course with the length of the car. The lower portion of these partitions extends in width from the side of the car toward the center of the car, on a line with the arms of the seats, and in height to nearly a level with the plane of the top of the backs of the seats when the same are arranged for sitting, as is represented by the letters P P in Fig. No. 1. This lower portion of the partition is thicker and stronger than the upper portions thereof, and is designed to be of sufficient thickness and strength to aid in support of the double couches or berths, and also of the lower single berth, as hereinafter described. The upper portion of the partition is of about half the width of the lower portion thereof, and reaches and is attached to the roof or top of the car, forming, with the lower portions of the partition, one entire piece, as represented by letters S S in Fig. No. 1. This portion of the partition is designed to be of less thickness and strength than the lower portion thereof, and is required to support the upper single berth or couch, as hereinafter described. This portion of the partition is constructed with a door or with blinds to open at pleasure for the purpose of ventilation, corresponding with the head and feet of the sleepers. Each division of the car formed by said partition contains two seats and accommodation for sitting or sleeping four persons in the ordinary-sized car.

The seats, when arranged for sleeping, form, with the backs, double beds or couches, as represented by letters *a a* in Fig. No. 3. The seats are the ordinary car-seats with such ad-

ditions and improvements as constitute in part the invention claimed.

There is a bead or rail of metal laid on the floor of the car, running longitudinally between the partition and in a line near the ends of the partitions upon which the legs of the seat are made to move. The arms and legs of the seat are of metal, and may be cast in one frame or piece or in separate parts.

The seats are supported as follows, viz: The farther extremity of the seat rests on a beam or rail attached to the inner side of the car, running longitudinally along the side of the car from nine (9) inches to one foot from the floor of the car, as represented by the letters *b b* in Fig. No. 1. The under side of this rail is hollowed out, forming a space between the side of the car and the outer edge or side of the rail.

Attached to the farther end of the seat, and fastened to the under side of the seat by screws or some equivalent, is a broad metal clamp having three sides, one of which is turned up and fits into the hollow space or groove in the said rail attached to the side of the car, so that the seat moves longitudinally on the said rail, as shown by letter *u* in Fig. No. 1, and is prevented from moving, except lengthwise, on the rail. This end of the seat is fastened to the rail at proper places by metal pins dropped through a plate attached to the seat into the rail, as represented by letter *c* in Fig. No. 1. The other end of the seat is supported upon legs of metal which are grooved at their extremities and stand upon and traverse longitudinally the said metal bead fixed in the floor of the car, as is represented by letters *d d* in Fig. No. 1. The movement of the legs of the seat on the said bead may be aided by wheels or rollers fixed in the grooves of the legs. The inner extremity of the seats to which the legs are attached is held firmly in its appropriate place by means of a metal latch attached to the bottom of the seat by a hinge, which is represented by the letter *e* in Fig. No. 1, which catches to staples fixed in the floor of the car at points where the seat is to be placed, as represented by letters *f''' f'' f' f* in Fig. No. 1. Thus the seats are moved from point to point and firmly fastened, according as they are to be used for sleeping or sitting, and to correspond with the direction in which the car is moving.

In Fig. No. 1 the car is supposed to be moving to the left. When the direction is reversed the seat A is moved from *f* to *f'*, so as to permit the occupant to face the partition on the right.

To the lower portion of each partition there is attached a rail or rest, as represented by the letters *o o* in Figs. Nos. 1 and 3, upon which the back of the front seat is supported when the seats are arranged for sleeping, as is shown by letters *o o* in Fig. No. 3. This rail or rest is attached to the side of the partition at a distance from the floor of the car corresponding with the height of the rail at the side of the car.

The backs of the seats are changed from an upright to a horizontal position for the purposes of forming double beds or couches in the following manner: The lower edge of the back is furnished at each extremity at equal distances from the lower angles with a short but strong metal arm or projection in Fig. No. 1, which moves in the curved and slotted space in the frame-work of the arm A and B at pleasure. This peculiar curve in the frame-work of the arm of this seat permits the back of the seat to be carried backward or forward without inconvenience, in order to adjust the seat either for sitting or sleeping, and comprises one of the principal features in this invention. When the seat is adjusted for sitting this arm or projection of the back rests upon and is held in place by the shoulder or rest, (letter *i* in B) in the frame-work of the arm, as in Fig. No. 1, thus holding the lower part of the back firmly and allowing a suitable inclination of the back.

At the center of the back, at either end, is attached a metal cog, *q*, which catches to a slotted or controlling spring, *k*, in seat A, attached to the arms of the seat, as in Fig. No. 1. When the seats are converted into a bed the back of the seat in Fig. No. 1 is raised from the said shoulder or rest *i* and falls into the said curved space *n n* in the arm of the seat, and is carried along said curve to the forward side of the seat and falls perpendicularly in the space *p*, as in Fig. No. 3, low enough to form a plane with the level of the seat. Thus one edge of the back is held in said arms by projections moving and resting in the curved spaces in the frame-work of the arms of the seat, and the other edge of the back rests on the rail *o*, as in Fig. No. 3, attached to the partition. This done, the back seat in Fig. No. 3 is adjusted to form, with the forward seat, the double bed or couch. The seat is moved back on the side rail, *b b*, and the bead *t* to the back partition, and is held in its place by the back, which is brought forward and falls, and is supported horizontally between the two seats, filling up the space between them, as hereinafter described. The back is moved forward, the arms or projections traversing the curved or slotted spaces in the frame-work of the arms, as in Fig. No. 1, and falls between

the seats, one edge of the back resting on the frame-work of the arms, as in Fig. No. 3, and the other edge on the side rail of the car, and on a sliding plate attached to the frame-work of the seat, (shown by letter *s* in Fig. No. 3,) which plate is adjusted so as to be drawn out at pleasure, and supports the edge of the back in a horizontal position, as in Fig. No. 3. The seats and backs thus adjusted form a double bed or couch, as in Fig. No. 3.

Each seat is furnished with two air-cushions. These cushions are placed upon the seats during the day, and are used as pillows at night. Two persons occupy the double couch when arranged as described, and two persons are placed in suspended berths or couches, which are arranged and adjusted as follows:

Within each division there are two metal rods running perpendicularly along the angle formed by the side of the car and the partition to the top of the car, which is represented by the letter *v* in Fig. No. 4, leaving a space between the several rods and the sides of the car and partitions. These rods are straight, except the upper ends, which in each are bent into a deep curve, the convex outward. Both berths are attached to these rods, and traverse the same by means of rings or eyes attached to the ends of the berths, near to or at the angles, as shown by letters *x x* in Fig. No. 1.

For a day-car these side berths or couches are changed from the positions to which they are adjusted for sleeping and arranged as follows: The side of berth No. 1 is raised on the rods till the eyes or rings reach the curves in the upper ends of the rods, and are there suspended and rest in the hollow of the curves. The front edge is let fall to the side of the car, and is held to the side of the car by a spring-catch, *z*, attached to the side of the car. The berth, when so suspended, is represented by letter E in Fig. No. 2. This done, berth No. 2 is also raised in the same way as berth No. 1 (the eyes or rings traversing the rods) and passes outside of berth No. 1 until it reaches the top of the car, and is held in a horizontal position near the top of the car by bolts attached to the ends of the berth, and which enter the sides of the partition, and by a link, *y*, attached to the top of the car and catching into a button attached to the edge of the berth, or by some equivalent. When these berths are prepared for sleeping the lower berth or berth No. 2 is let down first. It is disengaged from the link or its equivalent which supports its outer edge, and the bolts holding it to the sides of the partition withdrawn. It then falls, the eyes or rings traversing the rods till the berth rests horizontally on the supports furnished by the upper edges of the lower divisions of the partitions, where it is held in its place by the rods and the partitions, as shown by letter *w* in Fig. No. 3. When the lower berth is in its place the upper berth is raised up till the eyes are lifted out of the curves in the rods, and then let fall (the eyes traversing the rods) till it reaches

its proper horizontal position, and is supported there, the farther side resting upon two staples in the side of the car, through which pass hooks attached to the berth, as shown by letter *m* in Fig. No. 4, and the other side resting upon bolts which slide from the bottom of the berth into the side of the partition, as shown by letters *r r* in Fig. No. 3, thus holding the upper berth firmly in its place.

Fig. No. 1 in the annexed diagram exhibits a front view of a lateral division of a day-car with seats arranged for sitting, showing both ends of the seats and the upper or single berths adjusted as when not required for use. Letter *A* shows the end of the seat to which the legs are attached resting upon the bead and fastened by the latch to the floor of the car. Letter *u* shows the farther end of the seat resting upon the rail *b b* and attached to it by the broad clamp.

Fig. No. 2 shows the end view of the same division in lines when the seats are adjusted for sitting or for the day-car.

Fig. No. 3 exhibits a back view of a lateral

division of a car with seats and berths arranged for sleeping.

Fig. No. 4 exhibits the end view of the same division in lines representing the seats and berths as arranged for sleeping.

Having fully above described my new and improved sleeping-car and the mode of its construction and use, what I claim as my invention, and desire to secure by Letters Patent, is—

The single rods *v v* in relation to the berths or couches Nos. 1 and 2, the said rods being without collars or projections and attached at each end to the side of the car, in combination with the shifting seats, with slotted arms *A B* and reversible and convertible backs *a a*, the rail *o*, and bead *t*, with the partitions *S S*, the whole constructed, arranged, and operated in the manner and for the purposes set forth.

C. L. HARRINGTON.

Witnesses:

CHARLES GA. NUN,
P. M. JORDAN.