No Model.)

11 Sheets—Sheet 1.

L. F. RUTH.

SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

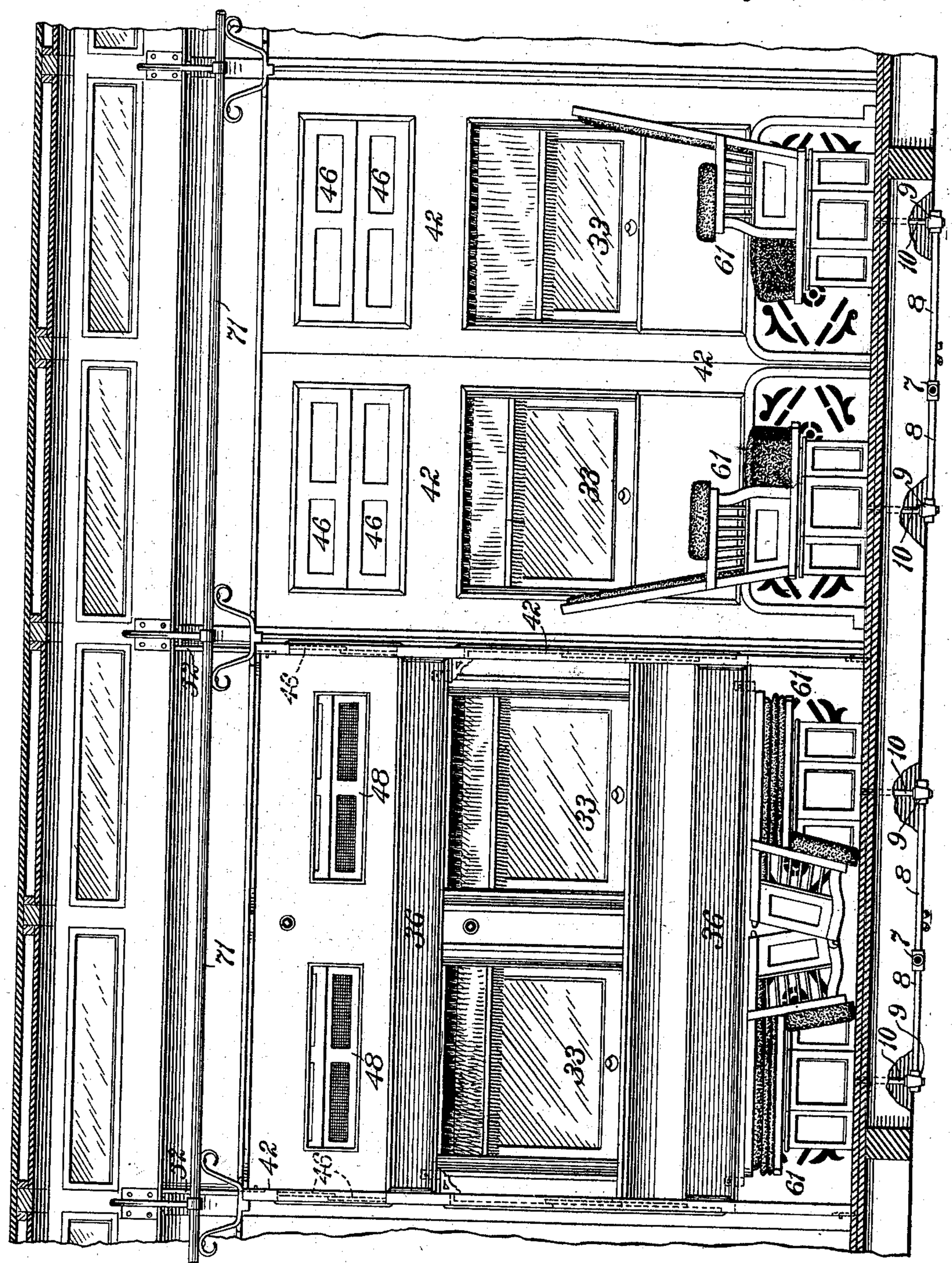

FIG. 1.

WITNESSES:

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by Jos. Howden Bell,

Att'y.

(No Model.) 11 Sheets—Sheet 2.

L. F. RUTH.

SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

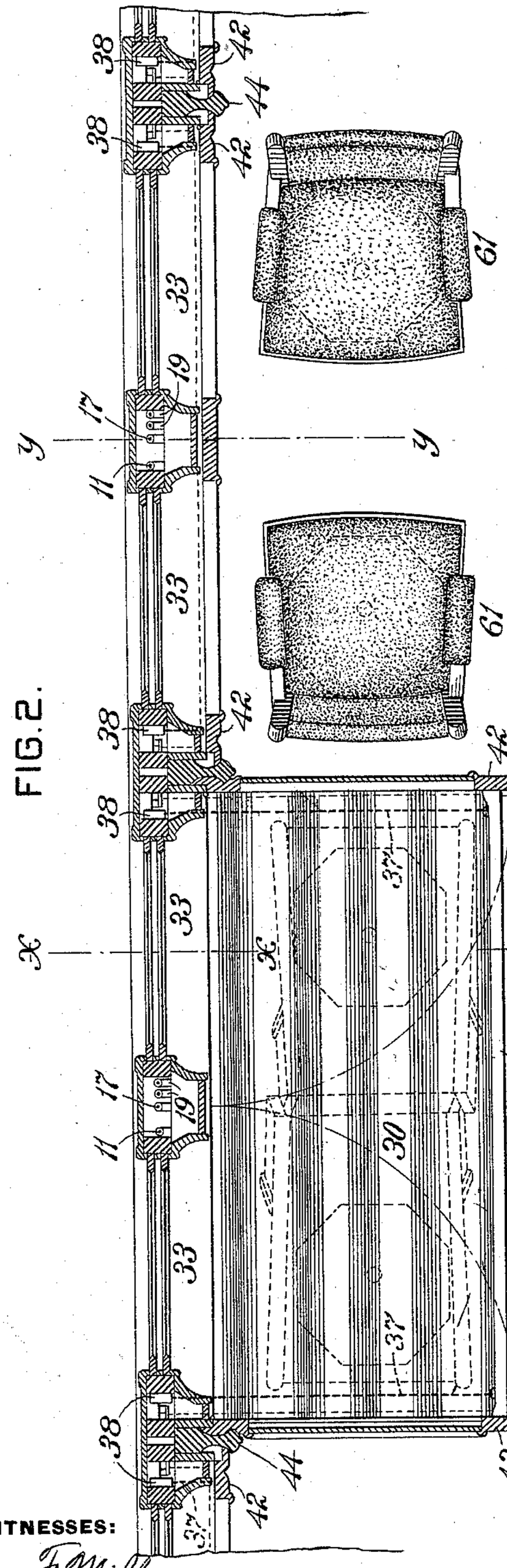

FIG. 2.

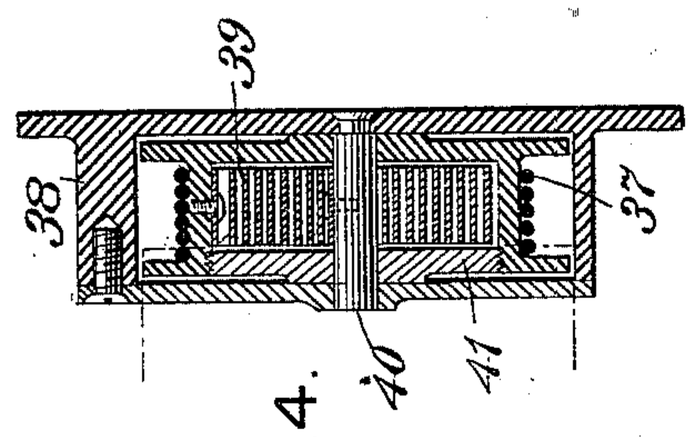

FIG. 4.

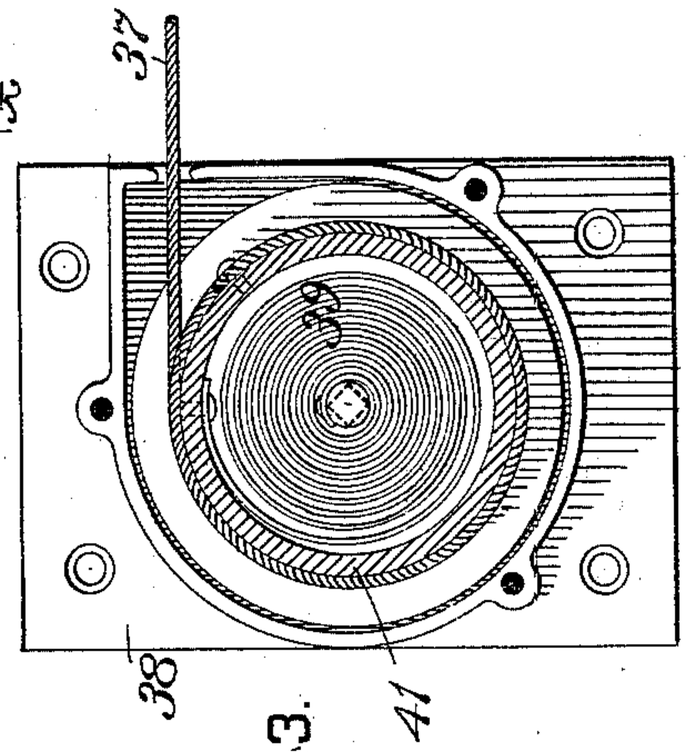

FIG. 3.

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(No Model.) 11 Sheets—Sheet 3.

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SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

FIG. 5.

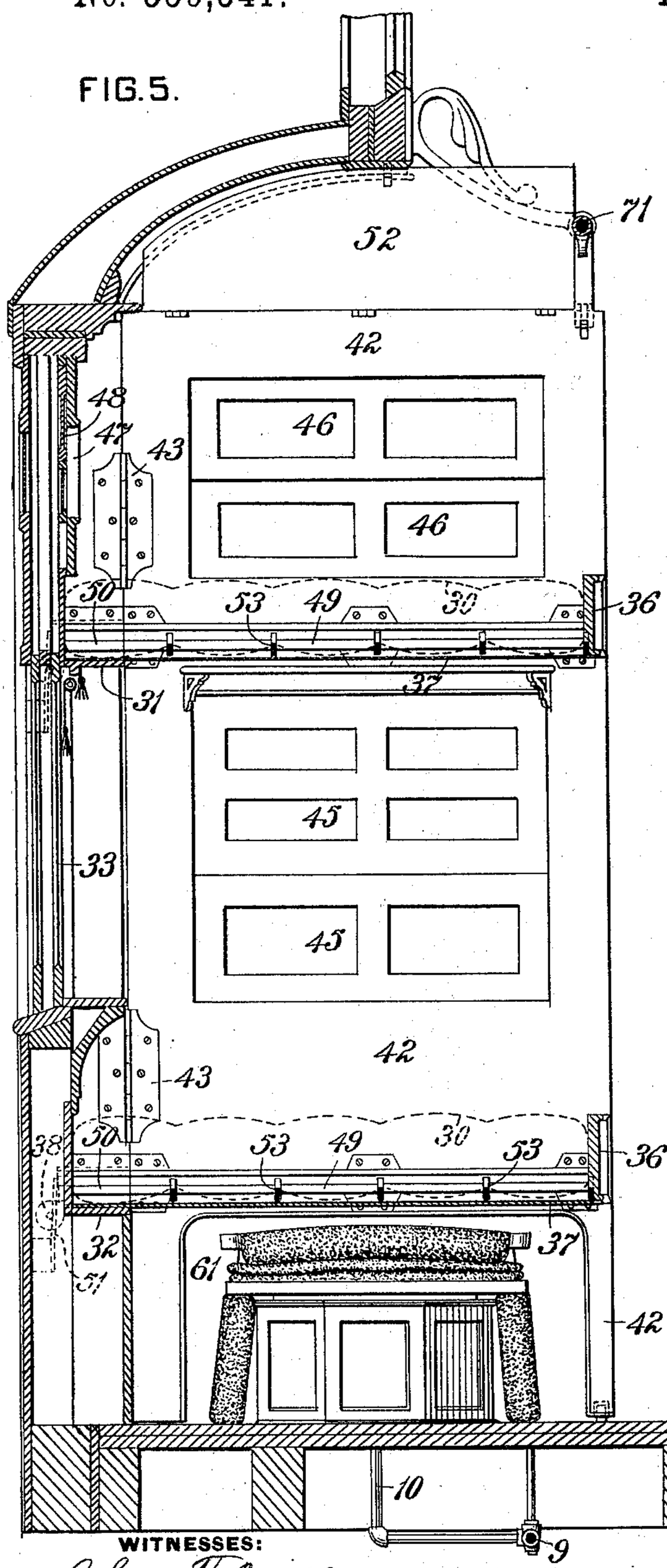
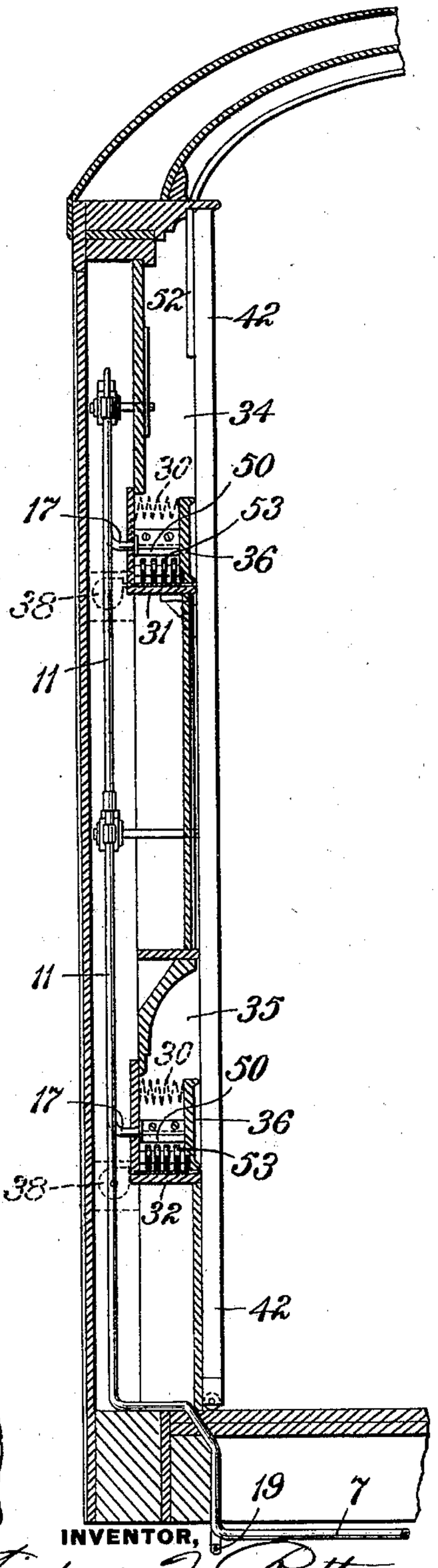


FIG. 6.



WITNESSES:

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(No Model.)

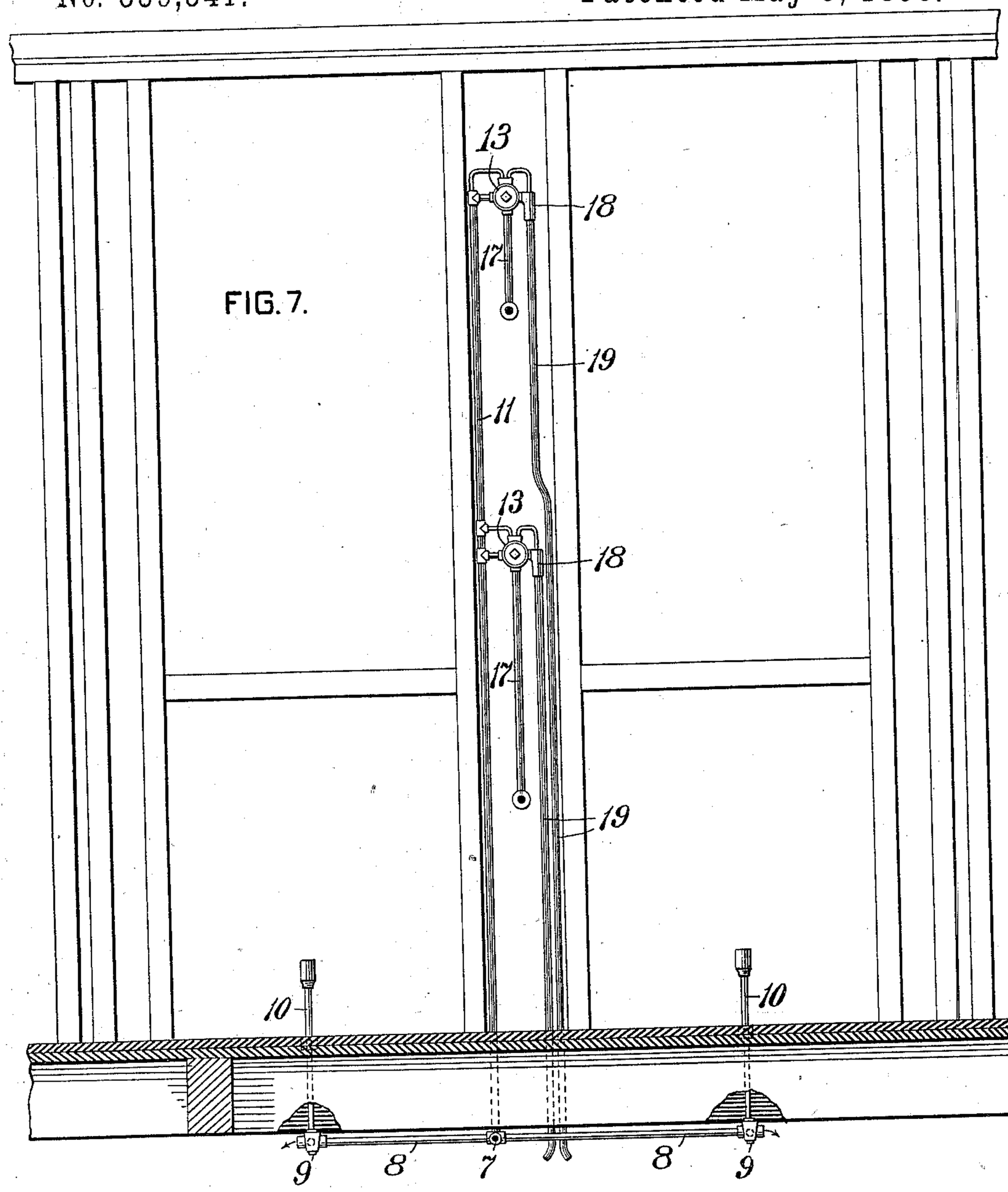
11 Sheets—Sheet 4.

L. F. RUTH.

SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

FIG. 7.



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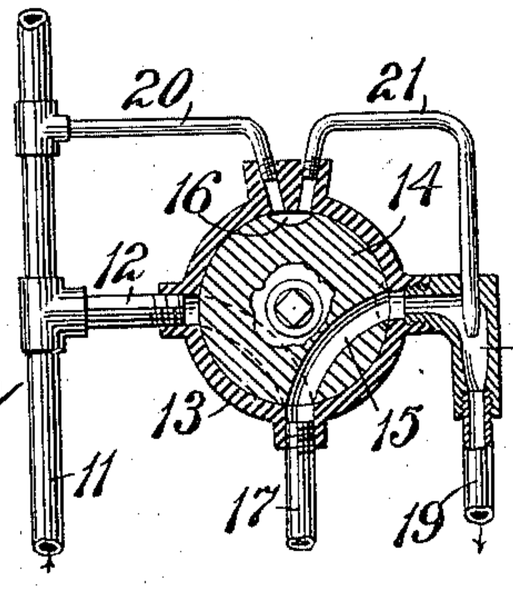

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(No Model.) 11 Sheets—Sheet 5.

L. F. RUTH.

SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

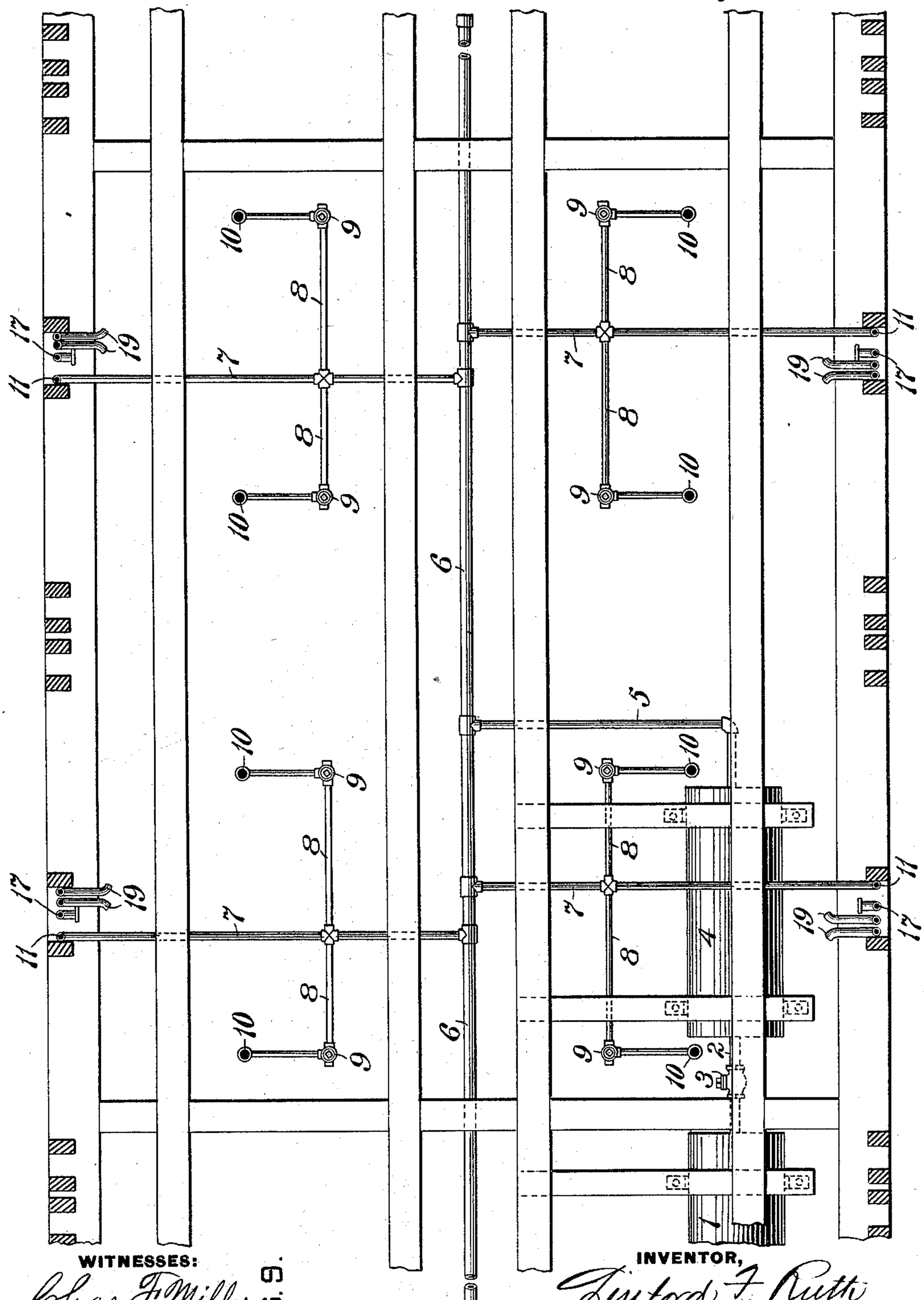

FIG. 9.

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(No Model.)

11 Sheets—Sheet 6.

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SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

FIG. 10.

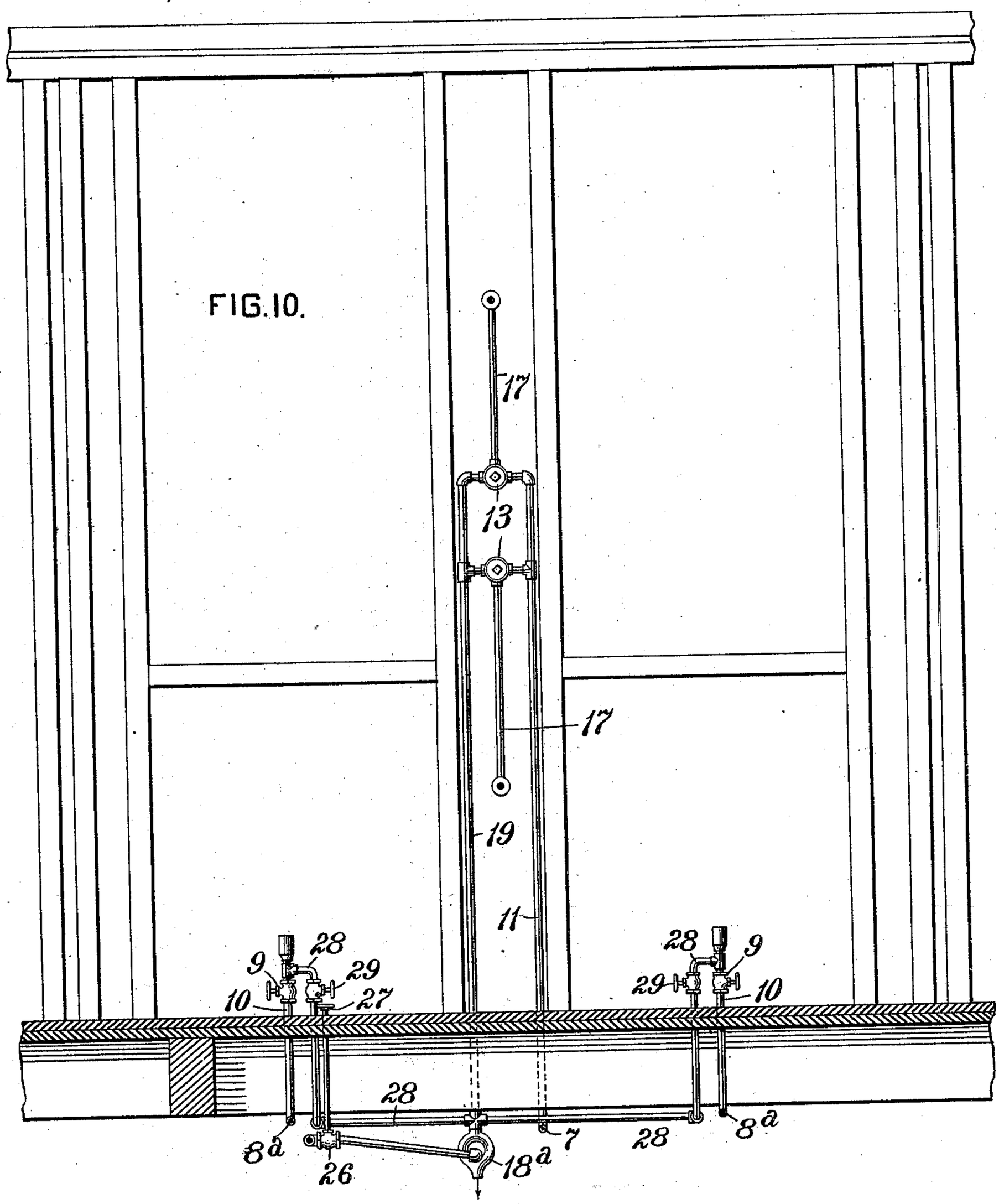
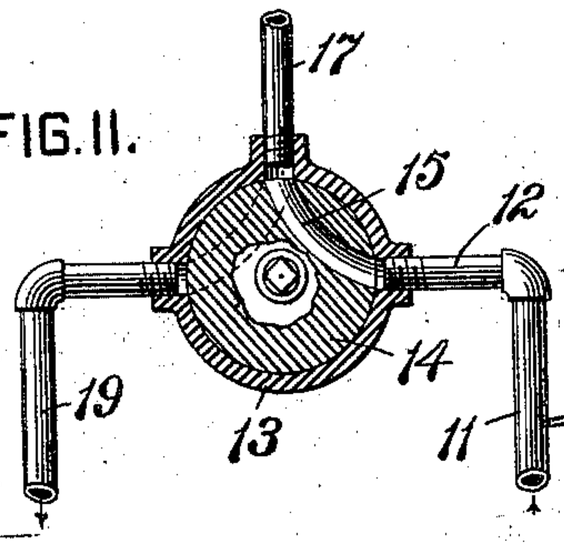


FIG. 11.



WITNESSES:

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(No Model.)

11 Sheets—Sheet 7.

L. F. RUTH.

SLEEPING CAR.

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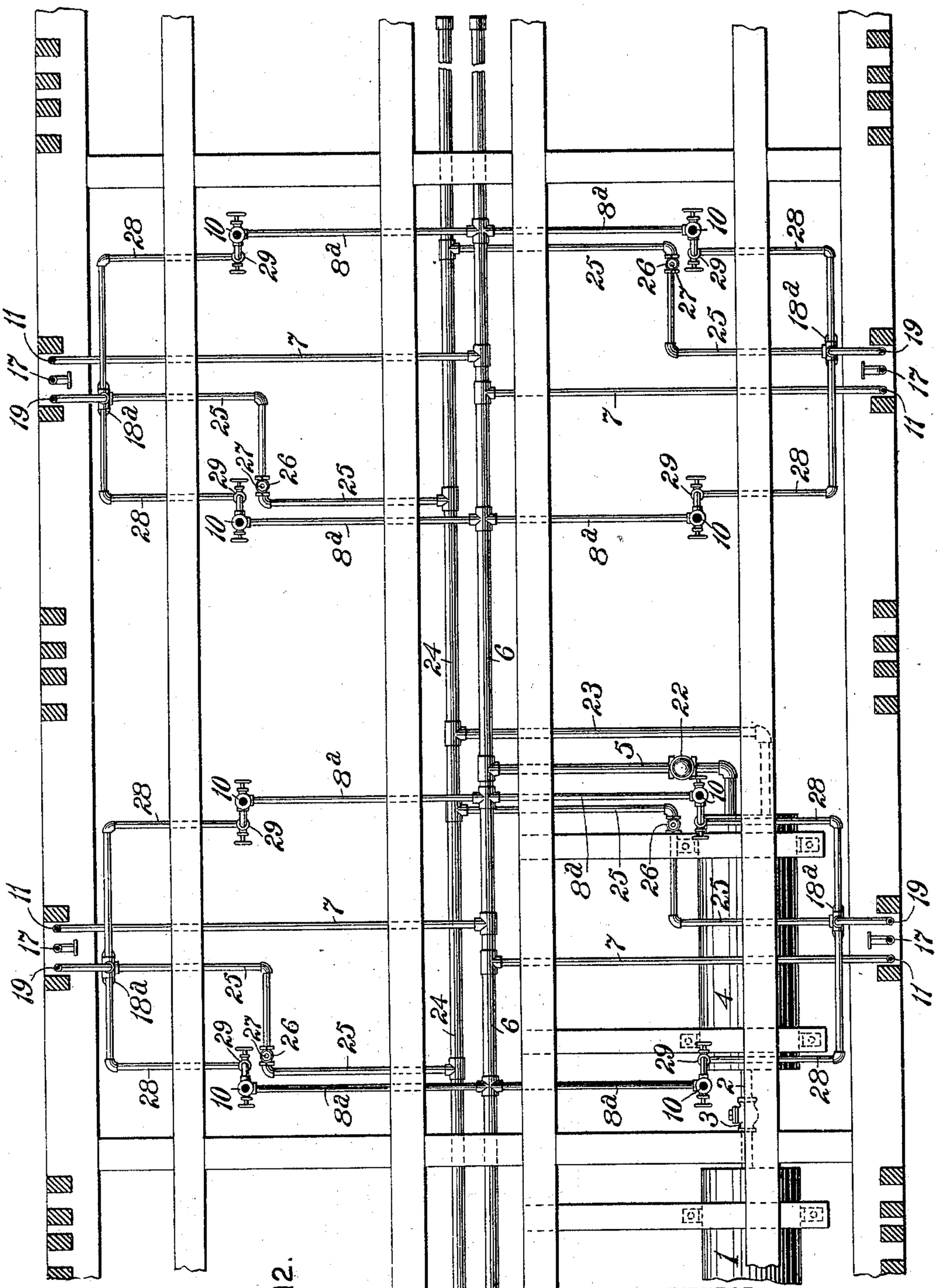

FIG. 12.

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(No Model.) 11 Sheets—Sheet 8.

L. F. RUTH.

SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

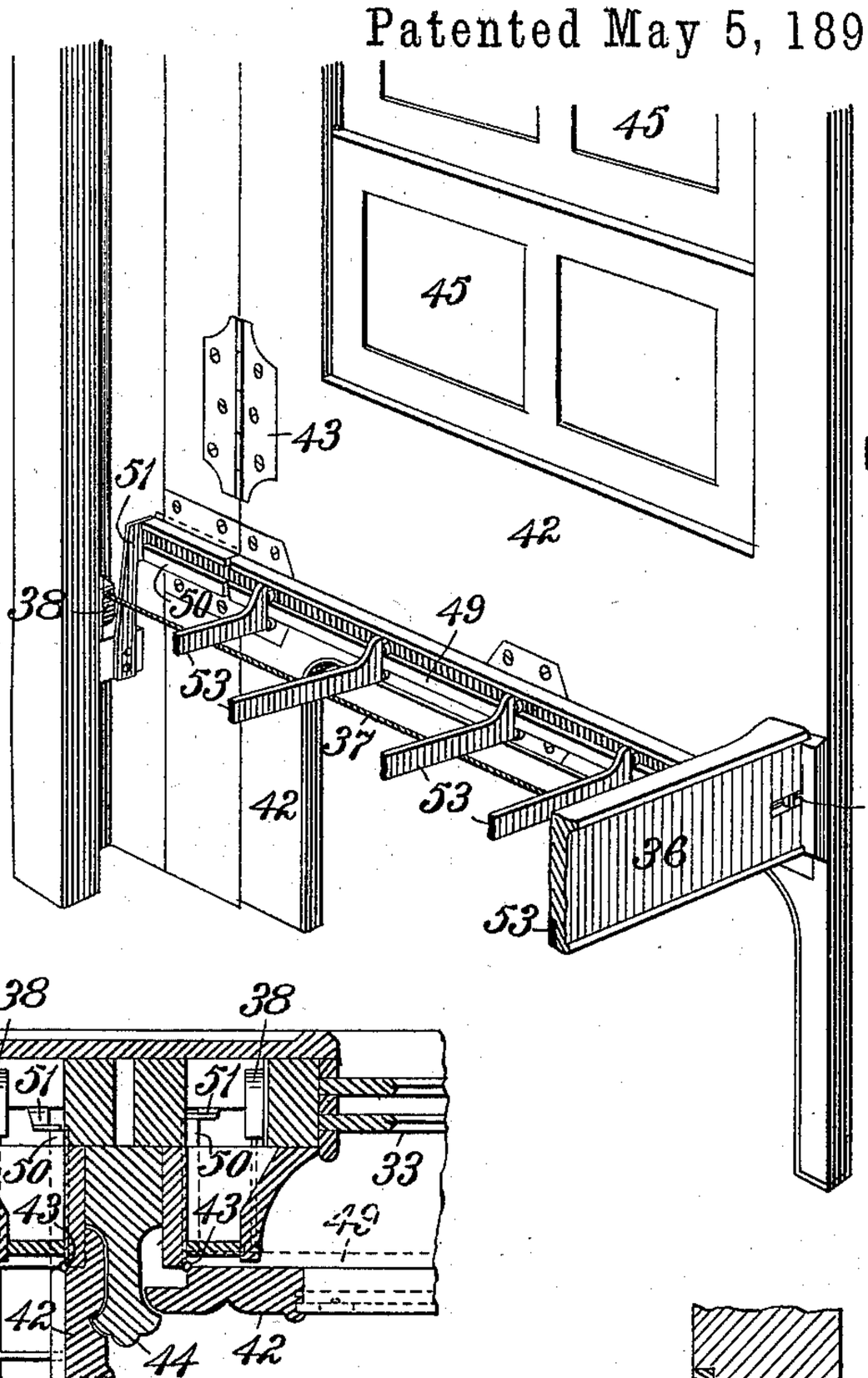

FIG. 15.

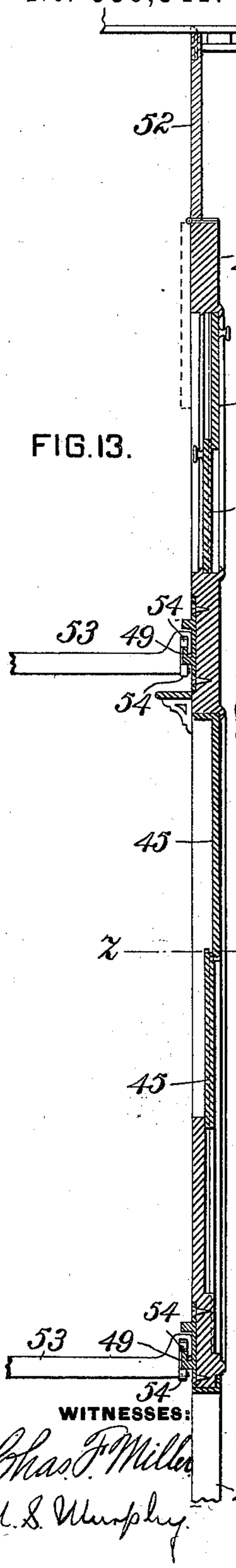

FIG. 13.

FIG. 16.

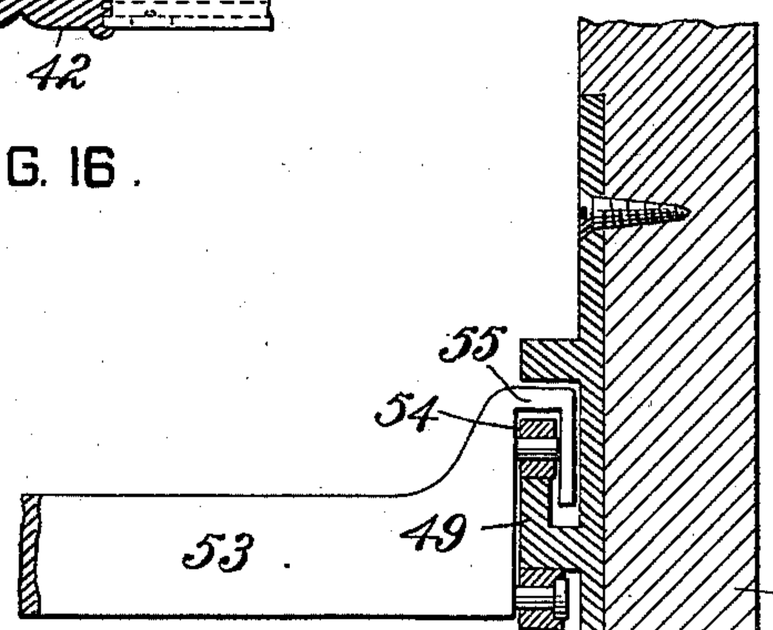

FIG. 14.

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(No Model.) 11 Sheets—Sheet 9.

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SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

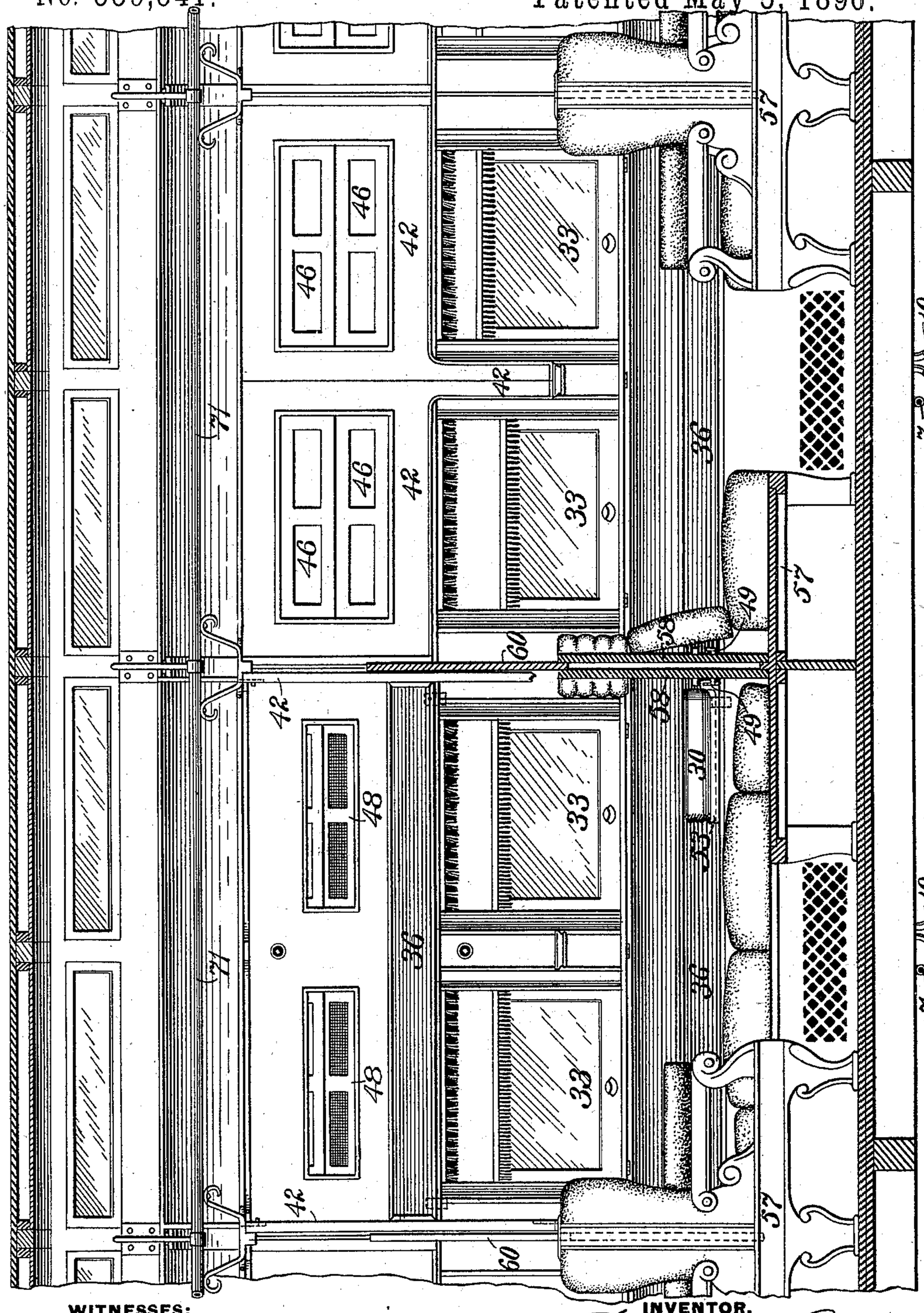

FIG. 17.

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(No Model.) 11 Sheets—Sheet 10.

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SLEEPING CAR.

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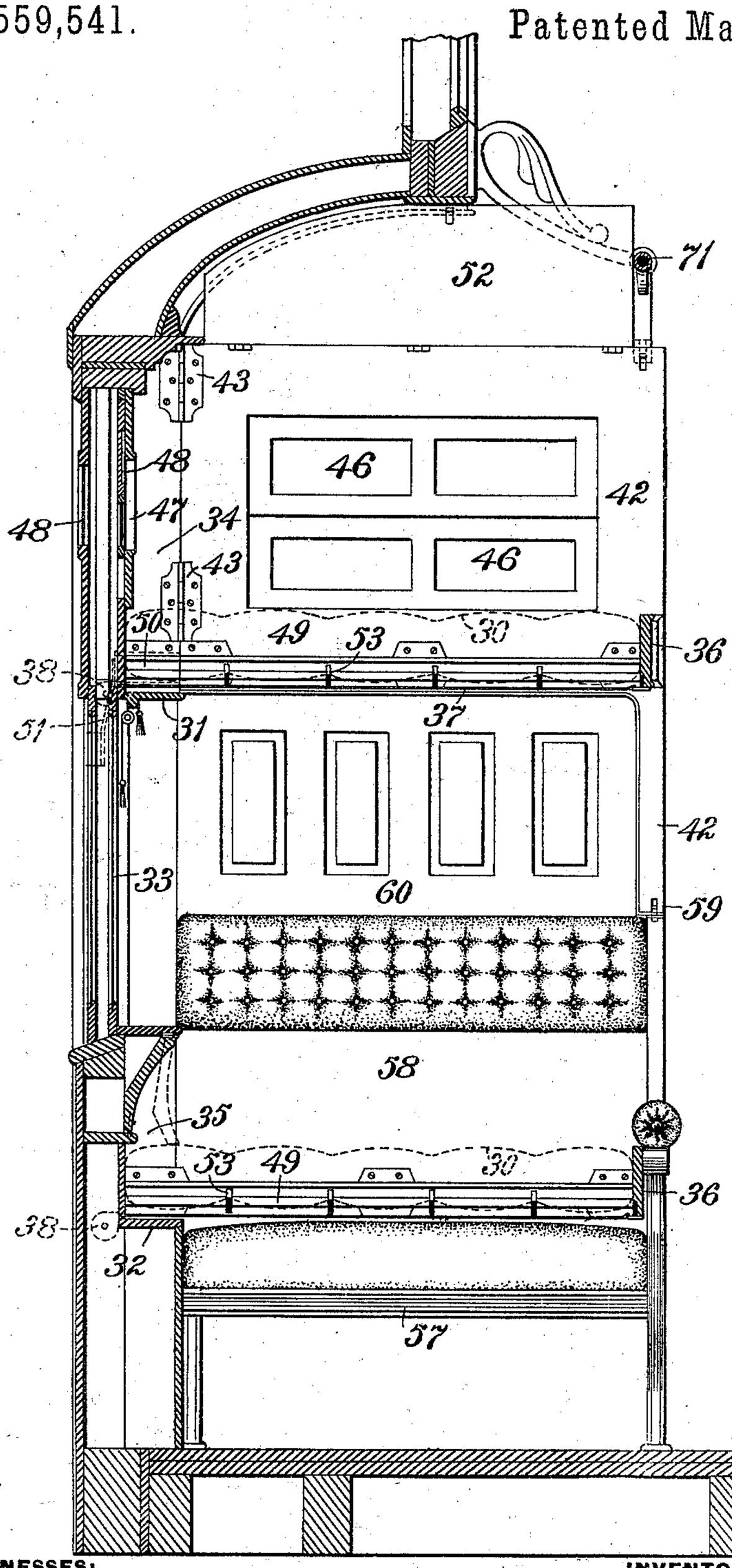

FIG. 18.

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(No Model.) 11 Sheets—Sheet 11.

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SLEEPING CAR.

No. 559,541. Patented May 5, 1896.

FIG. 19.

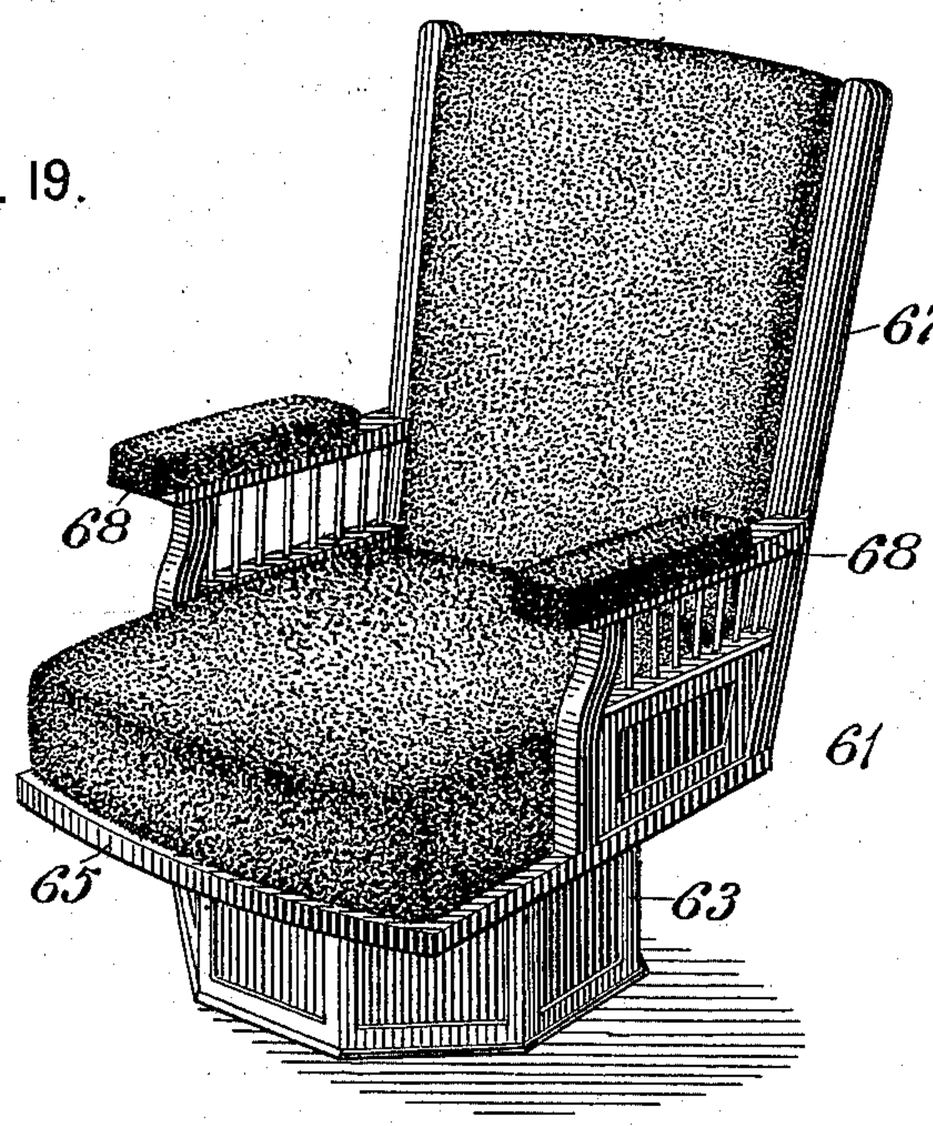


FIG. 22.

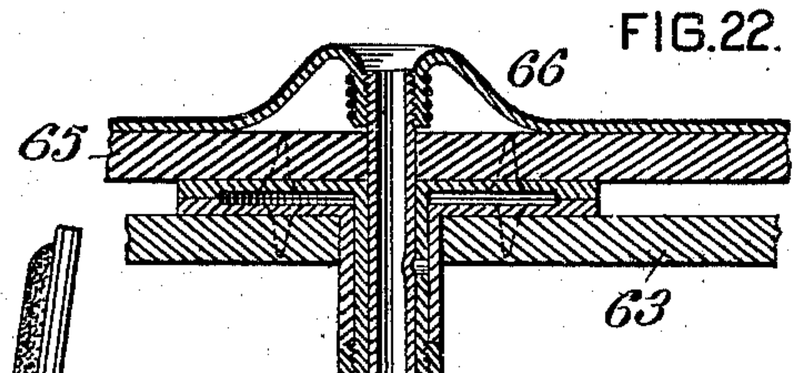


FIG. 20.

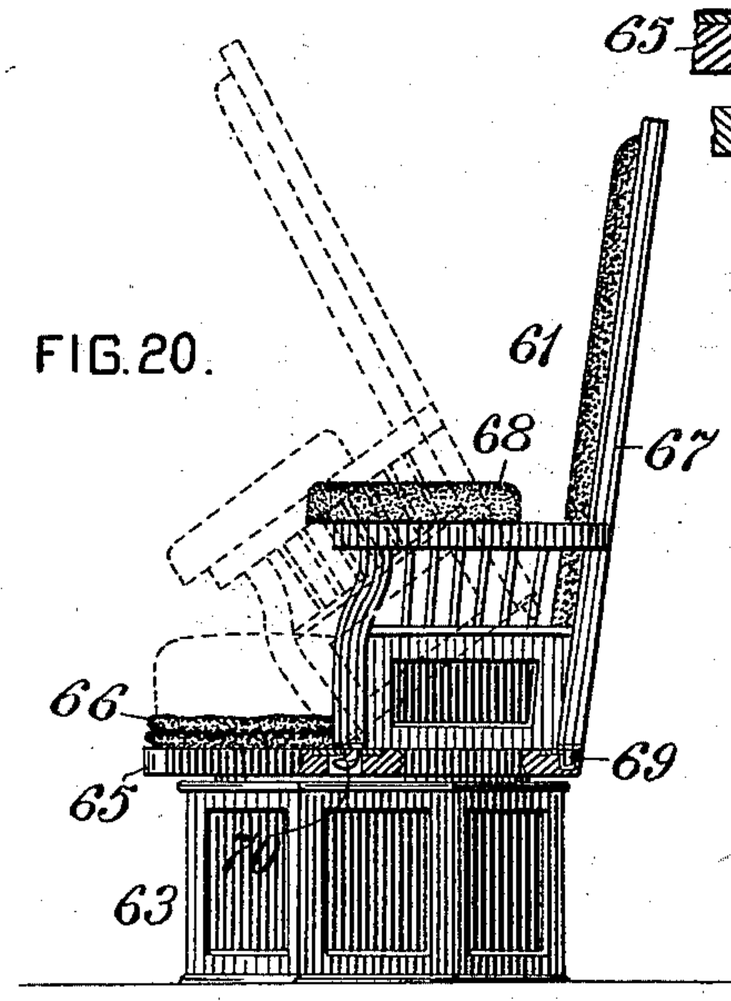
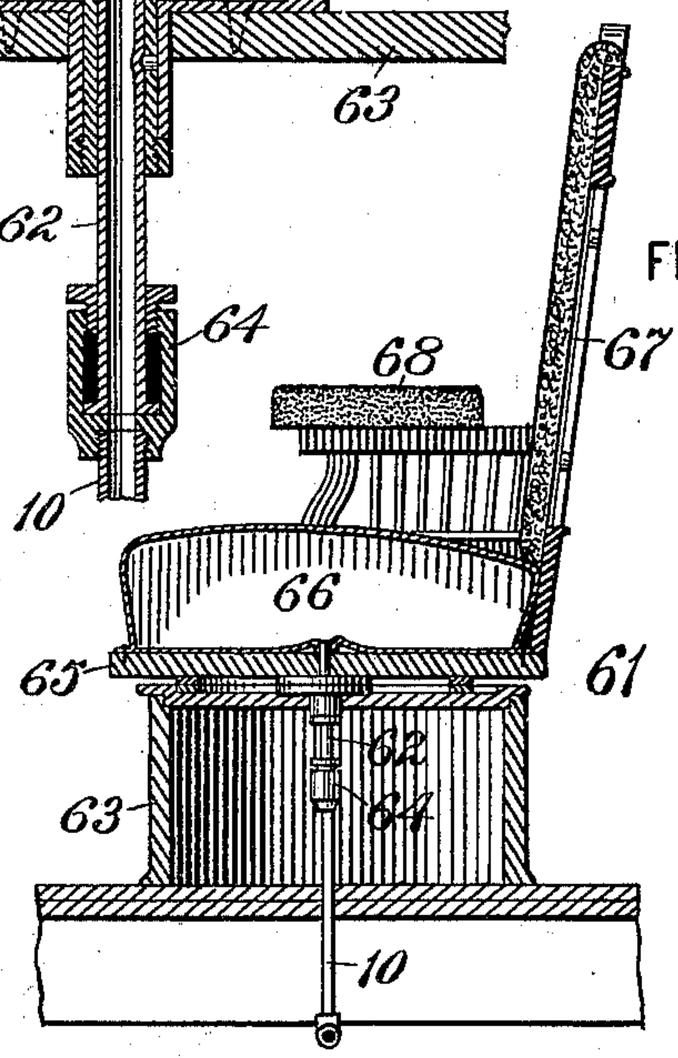


FIG. 21.



WITNESSES:

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M. L. Murphy.

INVENTOR,

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by J. Howard Pell,

Att'y.

UNITED STATES PATENT OFFICE.

LINFORD F. RUTH, OF CONNELLSVILLE, PENNSYLVANIA.

SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 559,541, dated May 5, 1896.

Application filed January 25, 1896. Serial No. 576,764. (No model.)

To all whom it may concern:

Be it known that I, LINFORD F. RUTH, a citizen of the United States, residing at Connellsville, in the county of Fayette and State of Pennsylvania, have invented or discovered a certain new and useful Improvement in Sleeping-Cars, of which improvement the following is a specification.

My present invention is an improvement upon that for which Letters Patent of the United States No. 529,961 for improvement in a combined sleeping and parlor car were granted and issued to me under date of November 27, 1894; and it relates to a sleeping-car which may either be of the type having the present standard fixed seats or be convertible by the manipulation of an attendant while in service into a so-called "parlor-car," fitted with separate chairs and in which pneumatic mattresses or cushions shall be employed.

The object of my invention is to provide improved means and facilities for supplying air to and discharging it from the mattresses or cushions with convenience and despatch; for firmly supporting and compactly storing the mattresses or cushions and the separate chairs when employed in suitable and convenient positions when in and out of use, respectively; for effecting a complete separation between adjoining sections of the car or opening one section to another as may from time to time be required, and for affording ventilation and light to the upper portions of the several sections.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical central sectional view taken through a portion of a convertible sleeping and parlor car, illustrating an application of my invention and showing the left-hand section with the parts in position for use as berths are made up in a sleeping-car and the right-hand section with the parts in position for day or parlor car service; Fig. 2, a horizontal sectional view taken through one side of the car, with the parts in the left and right sections in positions corresponding with those shown in Fig. 1; Figs. 3 and 4, transverse and axial sections, respectively, on an enlarged scale, through one of the retracting devices of the mattresses; Fig. 5, a vertical transverse section at the line $x\,x$ of Fig. 2 through one of the sections of the car, showing the mattresses as extended for occupancy by sleepers; Fig. 6, a similar section at the line $y\,y$ of Fig. 2, showing the mattresses as collapsed and retracted into their positions when not in use; Fig. 7, a vertical longitudinal section through the car-floor, showing, in elevation, a portion of a system of pipes and valves for the supply and release of compressed air to and from the mattresses and chair-cushions of one section of the car; Fig. 8, a transverse section, on an enlarged scale, of one of the governing-valves of the air-pipe system; Fig. 9, a sectional plan view showing the air-reservoirs and the air-pipe system of two opposite sections of the car. Figs. 10, 11, and 12 are views similar to Figs. 7, 8, and 9, respectively, but showing a modification of the air-pipe system and its accessories; Fig. 13, a vertical transverse section through one of the swinging partitions which support the mattresses when extended and form the divisions between adjacent sections; Fig. 14, a similar section, on an enlarged scale, through a portion of the same; Fig. 15, an isometrical view of a portion of the same, showing also portions of the longitudinal mattress-bars; Fig. 16, a horizontal section at the line $z\,z$ of Fig. 13 through one of the swinging partitions when in position to support a mattress, showing also a portion of the adjacent partition when closed in against the side of the car; Fig. 17, a vertical central sectional view taken through a portion of a sleeping-car, illustrating an application of my invention in connection with the present standard fixed seats; Fig. 18, a vertical transverse sectional view taken through a section of the same; Fig. 19, a view in perspective of a chair with pneumatic cushion, adapted to be folded below a lower berth when not in use; Fig. 20, a side view of the same; Fig. 21, a vertical central section through the same; and Fig. 22, a central section, on an enlarged scale, through the tubular pivot and a portion of the pneumatic cushion of the chair.

The main body of the car to which my invention is applied is, as in Letters Patent No. 529,961 aforesaid, adapted to be divided into a series of sections or lateral compartments,

each having proper space for an upper and a lower berth, and in a convertible sleeping and parlor car two chairs are located on the floor of each section, being so constructed that they may be folded below the level of the lower berth thereof when the latter is adjusted in position for use. The mattresses or bed-cushions, as well as the cushions of the chairs, when the latter are provided, are air-tight bags of rubber or other suitable material, which are, through suitably-controlled connections with a source of air under pressure, adapted to be inflated and distended when in use and collapsed and retracted for stowage in small compass when not in use.

Referring to Figs. 7 to 9, inclusive, an air-supply system is shown in which the auxiliary reservoir 1 of the air-brake apparatus of the car is connected by a pipe 2, having a check or non-return valve 3 with an air-supply reservoir 4. It will be obvious that, if preferred, the pipe 2 may be connected with the train-pipe of the brake apparatus or with any other suitable and preferred source of air under pressure. The supply-reservoir 4 is connected by a pipe 5 with a main supply-pipe 6, which extends longitudinally below the floor of the car near its center, and is connected by branch pipes 7 with vertical supply-pipes 11, one of which is provided for each section thereof and is located behind the inside paneling of the side frame of the car. The branch pipes 7 are connected by pipes 8, controlled by cocks or valves 9 with pipes 10, leading to the cushions of the chairs of the several sections, and the pipes 11 are connected by short branches 12 with mattress-operating valve devices 13, which are actuated by the porter or other attendant of the car to admit compressed air to and release it from the mattresses of the upper and lower berths to inflate the same for service and collapse them for stowage when out of use, respectively, as required. The valve devices 13, one of which is shown in enlarged section in Fig. 8, consist of a casing in which is fitted a three-way cock 14, having a passage-way 15 and a circumferential recess 16, located nearly opposite one end of said passage. The valve-casing is connected opposite the branch pipe 12 with an ejector-chamber 18, having a discharge-pipe 19, leading to a point below the floor of the car, and is also connected at right angles to the branch pipe 12 with a supply-pipe 17, leading to a nozzle on one of the mattresses of the section. A pipe 20 leads from the pipe 11 into the casing, and a pipe 21 leads from the casing adjacent to the opening of the pipe 20 into the ejector-chamber 18, within which it has a contracted discharge end or nozzle. When the cock is turned into the position in which its passage-way 15 connects the pipes 12 and 17, compressed air is supplied to the mattress, and when turned into the position shown in Fig. 8, in which the passage-way 15 connects the pipe 17 and ejector-chamber 18, the air is released from the mattress through the pipes 17 and 19 and is exhausted therefrom with much greater rapidity than if merely allowed to escape by the action of the jet of compressed air discharged into the ejector-chamber 18 through the pipe 20, valve-recess 16, and pipe 21.

Figs. 10 to 12, inclusive, illustrate a modification of the air-supply system in which only a single ejector is employed for each section instead of one for each mattress of the section, as in the instance first described, said ejector being adapted to exhaust either mattress singly or both coincidently, as well as to exhaust either or both of the chair-cushions.

The air-supply reservoir 4 is, as before, connected by a pipe 5 with a longitudinal main supply-pipe 6, which is in turn connected by branch pipes 7 with vertical supply-pipes 11, one of which is provided for each section. The pipe 5 may, if desired, be fitted with a pressure-reducing valve 22 in order that a lower pressure of air may be employed than that which is normally maintained in the air-brake apparatus. The main supply-pipe 6 is also connected by pipes 8^a, controlled by valves 9, with pipes 10, leading to the cushions of the chairs of the several sections. The vertical supply-pipes 11 are connected by short branches 12 with mattress-operating valve devices 13, which are similar in construction and function to those previously described, except as to their relation to the ejector, which is in this case common to both valve devices of the section, as presently to be described.

The cock 14 of each of the valve devices controls communication between the supply-pipe 11 and a supply-pipe 17, leading to a nozzle on one of the mattresses, and between said pipe 17 and a discharge-pipe 19, which is common to both valve devices and which leads into an ejector 18^a, located below the floor of the car. The ejector of each section is connected by a pipe 25, governed by a valve or cock 26, which is operated by a rod 27, extending through the floor of the car, with a longitudinal ejector supply-pipe 24, connected by a pipe 23 with the supply-reservoir 4. The pipes 10, which lead to the chair-cushions of each section, are connected by pipes 28, controlled by cocks or valves 29, with the ejector 18^a of the section in which they are located.

Air is supplied to either mattress of a section by turning the cock 14 of the valve device 13 into the position shown in Fig. 11, in which communication is established between the pipes 11 and 17, and air is exhausted from either or both mattresses by turning the cock or cocks 14 into position to establish communication between the pipes 17 and 19 and opening the ejector-valve 26, whereupon the jet of compressed air supplied to the ejector rapidly draws the air out of the mattress or mattresses which have been put into communication with the discharge-pipe 19. The ex-

haustion of air from the chair-cushions is similarly effected by opening the valves 29 and the ejector-valve 26.

Each section of the car is provided with two pneumatic mattresses or bed-cushions 30 similar in construction and operation, one for an upper and the other for a lower berth. The mattress, in and of itself, is not claimed as of my present invention and need not, therefore, be herein described further than as to its connection and combination with the air-supply system and the devices by which it is brought into and maintained in desired positions for use and for stowage when not in use.

The mattresses 30, which are indicated by dotted lines in Figs. 5 and 18 and shown in plan in Fig. 2 as inflated and expanded into their positions for use, have their ends plaited in the general manner of an accordion, so that, as indicated by dotted lines in Fig. 6, they may be folded compactly together when not in use, and during such periods they rest upon and are stowed on sills or shelves 31 32, located, respectively, above and below the window-sashes 33 of the car. The spaces or recesses 34 35 in the inside paneling of the car above the mattresses afford convenient room for the stowage of pillows and blankets during the day. The mattresses are connected on their sides nearest the inside paneling of the car with the air-supply pipes 17, as shown in Fig. 6, and are connected on the side nearest the central aisle of the car to longitudinal boards 36, which have been termed in Patent No. 529,961 "panel-rails," and may, for uniformity, be so designated herein. Each mattress is also connected on the side nearest the aisle by a flexible member, as a cord or chain 37, to a retracting device 38, (shown on an enlarged scale in Figs. 3 and 4,) which is fixed to the side of the car and comprises a spiral spring 39, one end of which is secured to a pin 40, fixed to the casing of the device, and the other to a drum 41, on which the cord or chain 37 is wound and to which it is secured. It will be seen that the spring 39, through its connection with the mattress, constantly tends to retract and fold the latter into the closed position indicated in Fig. 6.

The mattresses 30 are supported when inflated for use and the separation between adjoining sections of the car effected by paneled partitions 42, two of which are hinged to the side framing of the car adjacent to each of the dividing lines between the sections thereof. The partitions 42 are connected to the side of the car by hinges 43, and when swung inwardly on their hinges fit closely to the side of the car, so as to apparently constitute the inside paneling thereof, their inner ends projecting slightly beyond their hinges and fitting in lateral recesses in posts 44 of the car-frame, which extend inwardly beyond the inside paneling, as shown in Fig. 16, so as to make a neat finish with said posts and conceal the hinges. When swung outwardly preparatory to making up the berths, the two members of each pair of partitions fit closely, one against the other, and form the division or wall between the two sections on their outer sides, being held in position by suitable bolts or latches at their lower ends, which engage recesses in the floor, or, as shown in Figs. 1, 2, 16, and 17, when it is desired that one section shall remain made up for sleeping purposes and the adjoining section or sections be fitted for day use, a single partition 42 at each end of the made-up section serves to separate it from the open section at each end, the partitions at each end of which open section are closed up against the side of the car.

The partitions 42 are fitted with vertically-sliding panels 45, so located that, when moved downwardly to their lowest position, they fully expose the window-sashes 33, and are also provided with vertically-sliding panels 46, located above the level of the upper berth, these panels being provided for the purpose of exposing ventilating window-openings 47 in the side of the car, which are fitted with proper screens or sashes 48. In order to completely separate the sections at top, a top board 52, the upper side of which is curved in conformity with the roof of the car, is hinged to the top of each of the partitions 42 and is dropped down against the same when closed up to the side of the car, as shown in Fig. 6.

The mattresses 30, when inflated and expanded for use are supported in position therefor on horizontal guides or ways 49, (see Figs. 13 to 15, inclusive,) fixed to the sides of the partitions 42 next the ends of the mattresses, and on short supplemental guides 50 in line therewith, which supplemental guides are fitted, with a slight degree of longitudinal traverse, on the framing or panel-pieces to which the partitions 42 are hinged. The sides of the guides 49 bear against the adjacent ends of the supplemental guides 50, when the partitions 42 are swung up against the side of the car, and press them outwardly into the position shown in the upper right-hand portion of Fig. 16 against the tension of plate-springs 51, one of which is fixed to the framing, adjacent to and bearing against the outer end of each of the supplemental guides 50. When the partitions 42 are swung outwardly into position for supporting the mattresses, the sides of the main guides 49 are moved clear of the supplemental guides 50, and the springs 51 then force the latter closely against the adjacent ends of the guides 49, so as to form a continuous guideway or track throughout the width of the mattress at each end thereof.

The mattresses 30 are supported on the guides 49 50, through the intermediation of a series of longitudinal bars 53, one of which is fixed to the panel-rail 36 and the others to the bottom of the mattress, the bars 53 being properly spaced, so as to fit between the folds of the mattress when collapsed and retracted into position for stowage when out of use, as shown in Fig. 6. The ends of the bars 53 pro-

ject beyond the mattress and bear on the guides, preferably through upper and lower friction-rollers 54, journaled on their ends, and are provided with hooked projections 55 to prevent lateral displacement. The mattress is held in position, when expanded for use, by a lock-bolt or latch 56, which engages a recess in the adjacent partition 42. The sections, when made up for night use, are closed in front, or toward the aisle of the car, by curtains suspended from curtain-rods 71 in the ordinary manner. By the release of the lock-bolt the retracting device is permitted to draw the mattress into closed position on the exhaustion of pressure therefrom.

Figs. 17 and 18 illustrate the application of my invention in a car having fixed seats 57 of the present standard pattern. The construction is in such case similar in all essential particulars to that above described, the modification of specific structure being as follows: The swinging partitions 42 extend only to the tops of the seat-backs 58, to which they are connected by lock-bolts or latches 59, when swung outwardly from the side of the car. They are also recessed to receive a panel 60, which, when removed, is dropped into the space between two adjacent seat-backs and allows free access to the entire area of the window-sash 33, as shown on the right-hand side of Fig. 17. The guides 49, on which the lower mattress of the section is supported, are secured to the seat-backs 58, and the supplemental guides 50, not being necessary for the lower mattress, are dispensed with. In all other respects the construction accords with that previously described and does not in any wise involve a departure from its principle of operation or governing structural features.

Where, as shown in Figs. 1, 2, and 5, the invention is applied in a convertible sleeping and parlor car—that is to say, one which is adapted by manipulation of an attendant while in service to be put into condition for use either as a sleeping-car or a parlor-car having separate chairs—each section is provided with two revolving chairs so constructed as that when not in use they may be folded into such compass as will enable them to be stowed below the lower mattress of the section when the same is expanded into position for use. The preferred construction for this purpose is shown in Figs. 19 to 22, inclusive, in which the chair is provided with a tubular pivot 62, adapted to rotate in a bearing on a box or case 63, which is fixed to the floor of the car and incloses the air-supply pipe 10 of the chair, which leads from the air-supply system, as previously described. The tubular pivot 62 rotates in a properly-packed stuffing-box 64, on the supply-pipe 10, and is fixed to the bottom 65 of the chair, its upper end opening into the pneumatic cushion 66. The back 67 and arms 68 of the chair are connected one to the other, so as to form a single structure, and are coupled to the chair-bottom 65 in any suitable manner, as by pins 69 and hooks 70, so as to be detached from and folded over on the chair-bottom and to rest below the lower mattress for night service, when the chair-cushion is collapsed by the exhaustion of air therefrom, as shown at the left of Fig. 1 and in Fig. 5. When any one or more sections are to be used as parlor-car sections, the chair-cushions are inflated by opening the controlling-valves 9 of the supply-pipes 10 and the backs and arms are adjusted in proper position upon the chair-bottoms.

A special feature of practical value in my invention consists in its ready adaptability to sleeping-cars of the ordinary types, in which fixed seats are employed. The advantages of material reduction of weight, cleanliness of mattresses, improved ventilation of upper berths, complete isolation of adjoining sections, and facility and rapidity of closing up the mattresses for stowage when not in use, which are, among others, resultant in the practice of the invention, may thus be attained at comparatively small expense without involving the removal or disuse of parts other than the existing swinging upper berths. In new constructions the convertibility of the car from sleeping to parlor car conditions, and vice versa, is additionally desirable and advantageous.

While I have illustrated and described my invention herein as applied only in a railroad-car, it will be obvious that its application is not limited to such specific structure, as it may, without variation of structural or operative principle, be similarly applied in other apartments, either portable or fixed, for the accommodation of passengers or guests—as, for example, the saloons of excursion or other steam vessels, parlors or reception-rooms of public houses, &c. I do not, therefore, desire to limit myself to the specific application herein set forth, and in referring to a railroad-car I include as the mechanical equivalent thereof under my invention any other apartment or structure in which, by similar combinations of devices to those described and claimed herein, the same new and useful results are attainable.

I claim as my invention and desire to secure by Letters Patent—

1. The combination, substantially as set forth, of an air-supply reservoir, a pipe connecting said reservoir with the pneumatic brake apparatus of a car, a check-valve in said connecting-pipe, which is adapted to permit the flow of air from the brake apparatus to the supply-reservoir when the pressure in the former exceeds that in the latter, and to close automatically and prevent back-flow of air from the supply-reservoir whenever the pressure therein is greater than that in the brake apparatus, an extensible and collapsible mattress connected by piping to said supply-reservoir, and a valve device controlling the supply of air from the reservoir to the mattress and its exhaust therefrom.

2. The combination, substantially as set forth, of an air-supply reservoir, an extensible and collapsible mattress connected by piping to said supply-reservoir, a valve device controlling the supply of air from the reservoir to the mattress and its exhaust therefrom, and an ejector communicating with the exhaust-passage of the mattress.

3. The combination, substantially as set forth, of an air-supply reservoir, two extensible and collapsible mattresses supported one above another in proper relation to form upper and lower berths of a section or division of a car, two chairs having expansible and collapsible cushions and supported upon the floor of the car within the section, piping connecting the mattresses and chair-cushions with the supply-reservoir, valve devices controlling the supply and exhaust of air to and from the mattresses and chair-cushions, an exhaust or discharge pipe common to the mattresses and chair-cushions, and an ejector communicating with said exhaust-pipe.

4. The combination, substantially as set forth, of an air-supply reservoir, a plurality of extensible and collapsible mattresses connected by piping to said reservoir, a pressure-reducing valve controlling the delivery of air from the reservoir to said piping, valve devices independently controlling the supply of air to the mattresses and its discharge therefrom, an ejector supply-pipe leading out of the supply-reservoir, and a plurality of ejectors, each receiving air from said ejector supply-pipe and communicating with the exhaust-passage of one or more of the mattresses.

5. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, supports hinged to the side of a car adjacent to the ends of the mattress, guides or trackways fixed to said supports, and a series of longitudinal bars connected to the mattress, and having their ends projecting beyond the same, so as to traverse longitudinally on, and rest upon, the guides when the supports are adjusted in position to support the mattress.

6. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, supports hinged to the side of a car adjacent to the ends of the mattress, guides or trackways fixed to said supports, a series of longitudinal bars connected to the mattress and having their ends projecting beyond the same, friction-rollers through which said longitudinal bars bear on the guides, when the supports are adjusted in position to support the mattress, and hooked projections on the bars for preventing their displacement from the guides.

7. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, supports hinged to the side of a car adjacent to the ends of the mattress, guides or trackways fixed to said supports, supplemental guides fitted, with a limited traverse, on the side of the car, springs bearing on said supplemental guides and maintaining them in contact with the main guides, and a series of longitudinal bars connected to the mattress and having their ends projecting beyond the same, so as to traverse longitudinally on, and bear upon, the guides, when the supports are adjusted in position to support the mattress.

8. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, supports hinged to the side of a car, adjacent to the ends of the mattress, guides or trackways fixed to said supports, members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the supports are adjusted in position to support the mattress, a retracting device for moving the mattress into collapsed position upon the release of air therefrom, and an ejector communicating with the release or discharge outlet of the mattress.

9. The combination, substantially as set forth, of an extensible and collapsible mattress, a sill or shelf for supporting said mattress adjacent to the side of a car, when collapsed, a pipe for the supply and exhaust of air to and from the mattress, partitions hinged to the side of a car adjacent to the ends of the mattress, and having paneling closing the space above the supporting-sill when moved into position parallel with the side of the car, guides or trackways fixed to said partitions, and members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

10. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, paneled partitions, hinged to the side of a car adjacent to the ends of the mattress, sliding panels fitted in said swinging partitions, and movable therein so as to uncover openings opposite to, and of substantially equal area with, those of the car-window sashes, when moved into position parallel with the side of the car, guides or trackways fixed to said partitions, and members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

11. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, paneled partitions, hinged to the side of a car adjacent to the ends of the mattress, ventilating-openings formed in the car above its windows and provided with sash or screen closure, sliding panels

fitted in said partitions and movable therein so as to uncover openings opposite to, and of substantially equal area with, those of the ventilating-openings, when moved into position parallel with the side of the car, guides or trackways fixed to said partitions, and members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

12. The combination, substantially as set forth, of a plurality of extensible and collapsible mattresses, set end to end, pipes for the supply and exhaust of air to and from the mattresses, paneled partitions, two of which are hinged to the side of a car, between the ends of two adjacent mattresses, guides or trackways fixed to said partitions, and members connected to the mattresses and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

13. The combination, substantially as set forth, of a plurality of extensible and collapsible mattresses, set end to end, pipes for the supply and exhaust of air to and from said mattresses, paneled partitions, two of which are hinged to the side of a car, between the ends of two adjacent mattresses, and which have their ends projecting beyond their hinges, car-frame posts, each projecting inwardly beyond the inside paneling of the car, between the frame members to which two adjacent partitions are hinged, and having lateral recesses which receive the end portions of the partitions in either position thereof, guides or trackways fixed to said partitions, and members connected to the mattresses and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

14. The combination, substantially as set forth, of an expansible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, paneled partitions, hinged to the side of a car, adjacent to the ends of the mattress, boards hinged to the upper sides of the partitions and adapted to substantially close the space between the same and the car-roof, when the partitions are moved into positions transverse to the car, guides or trackways fixed to said partitions, and members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the partitions are moved into positions transverse to the car.

15. The combination, substantially as set forth, of two or more pairs of fixed car-seats, an extensible and collapsible mattress supported on the side of the car between two of said seats, a pipe for the supply and exhaust of air to and from the mattress, paneled partitions hinged to the side of the car adjacent to the ends of the mattress and fitting over the tops of the adjacent seat-backs, when moved into position transverse to the car, panels closing openings in said partitions which give free access to the window-sashes of the car, when the partitions are moved into positions parallel with the side of the car, said panels being movable into the space between two adjacent seat-backs, guides or trackways fixed to the seat-backs, and members connected to the mattress and adapted to traverse longitudinally on, and rest upon, said guides.

16. The combination, substantially as set forth, of two or more pairs of fixed car-seats, paneled partitions hinged to the side of the car, each above a seat-back and fitting over the top of the same, when moved into position transverse to the car, panels closing openings in said partitions which give free access to the window-sashes of the car, when the partitions are moved into positions parallel with the sides of the car, said panels being movable into the space between two adjacent seat-backs, an extensible and collapsible mattress supported on the side of the car between the partitions, a pipe for the supply and exhaust of air to and from the mattress, guides or trackways fixed to the partitions, and members connected to the mattress and adapted to traverse longitudinally on and rest upon, said guides, when the partitions are moved into positions transverse to the car.

17. The combination, substantially as set forth, of an extensible and collapsible mattress, a pipe for the supply and exhaust of air to and from the mattress, paneled supports hinged to the side of a car adjacent to the ends of the mattress, guides or trackways fixed to said supports, members connected to the mattress and adapted to traverse longitudinally on, and rest upon, the guides, when the supports are adjusted in position to support the mattress, chairs having expansible and collapsible seat-cushions and journaled by tubular pivots on their bases, pipes communicating with said tubular pivots for the supply and exhaust of air to and from the seat-cushions, and connected backs and arms which are coupled detachably to the chairs, and are adapted to be folded down thereon below the mattress when the latter is extended and the seat-cushions are collapsed.

In testimony whereof I have hereunto set my hand.

LINFORD F. RUTH.

Witnesses:
J. SNOWDEN BELL,
F. E. GAITHER.