

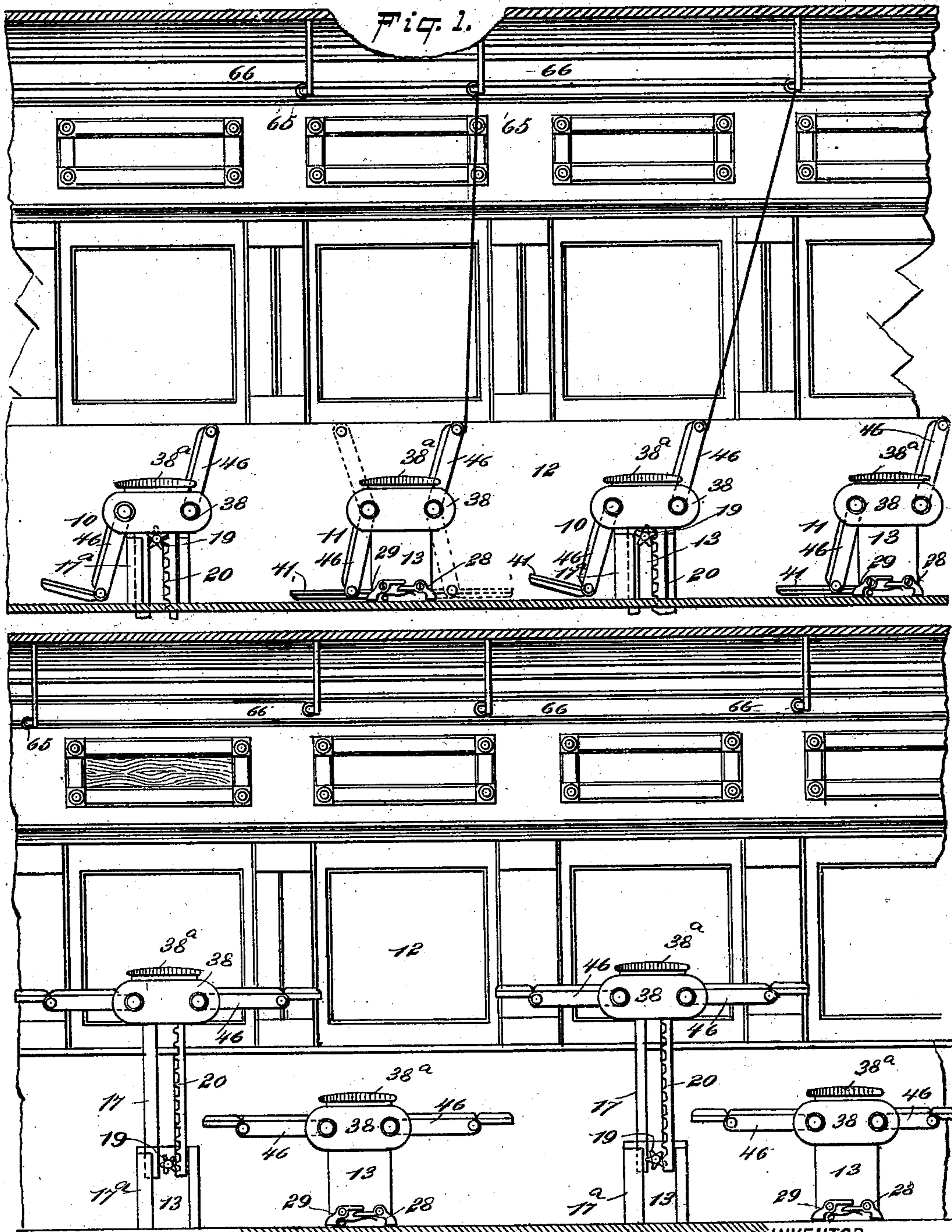
(No Model.)

5 Sheets—Sheet 1.

J. M. OSGOOD.
CAR SEAT.

No. 549,527.

Patented Nov. 12, 1895.



WITNESSES:

William Goebel.
H. B. Hutchinson

Fig. 2.

INVENTOR

J. M. Osgood
BY
Munn & Co
ATTORNEYS.

(No Model.)

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Fig. 3.

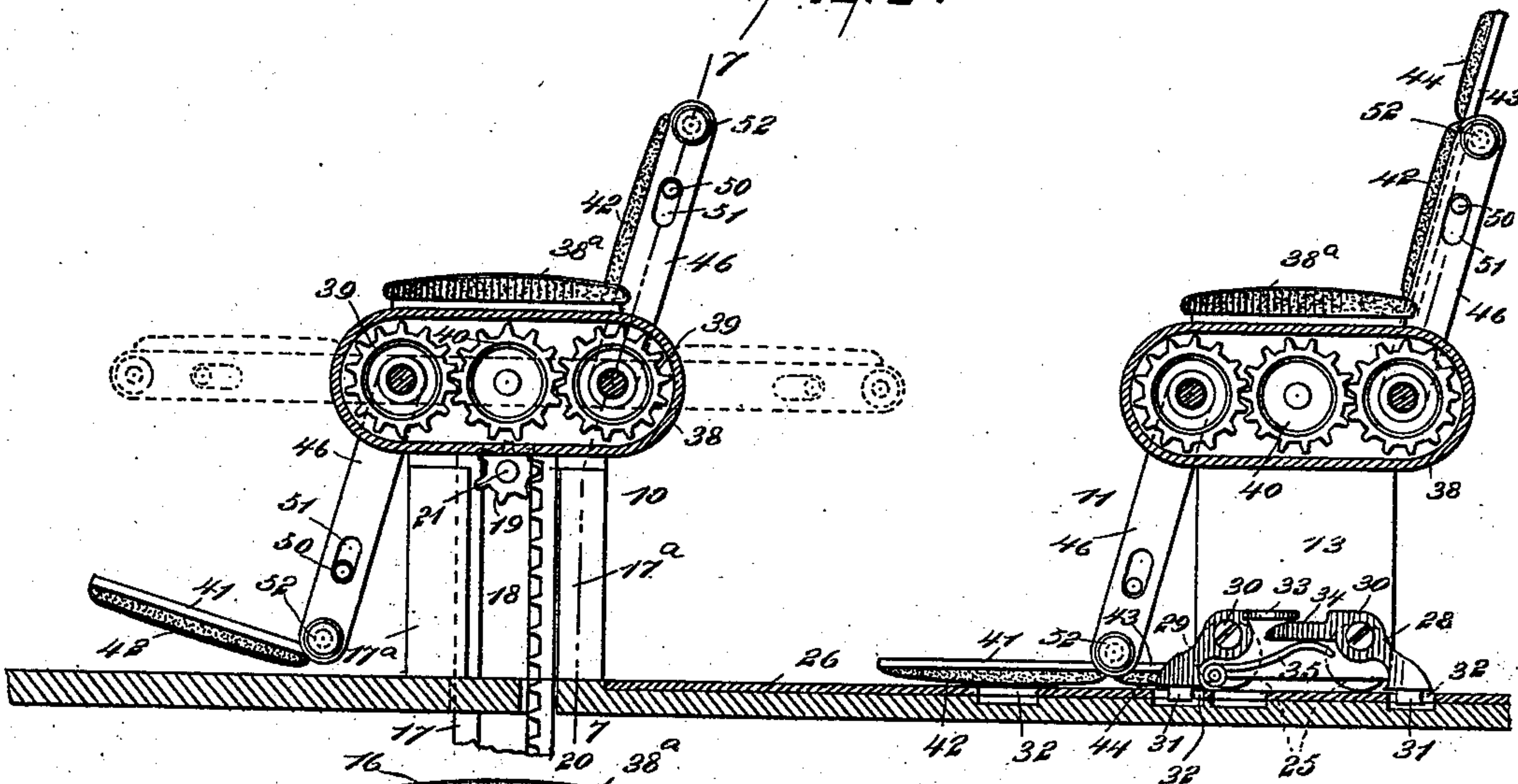


Fig. 4.

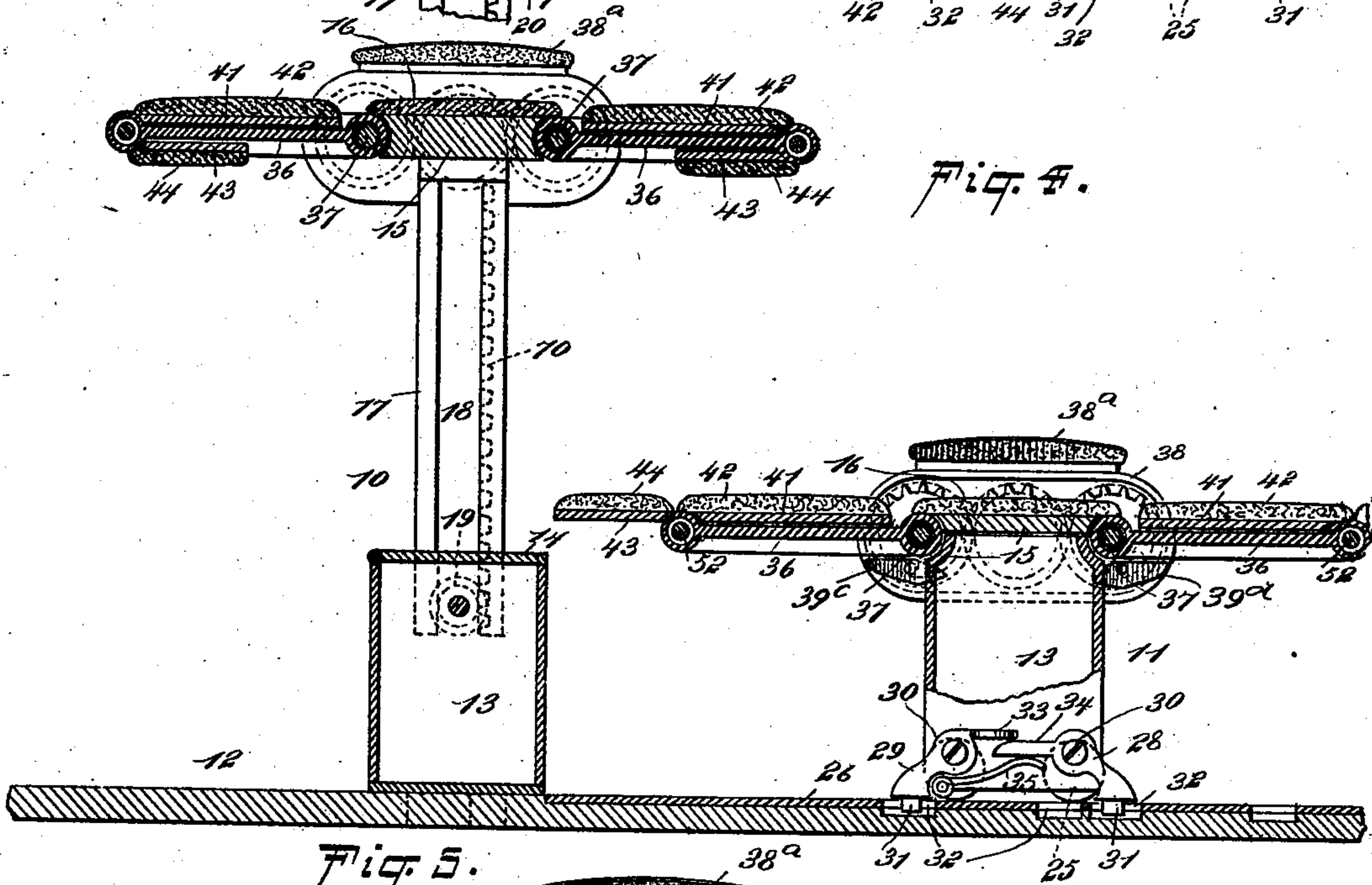
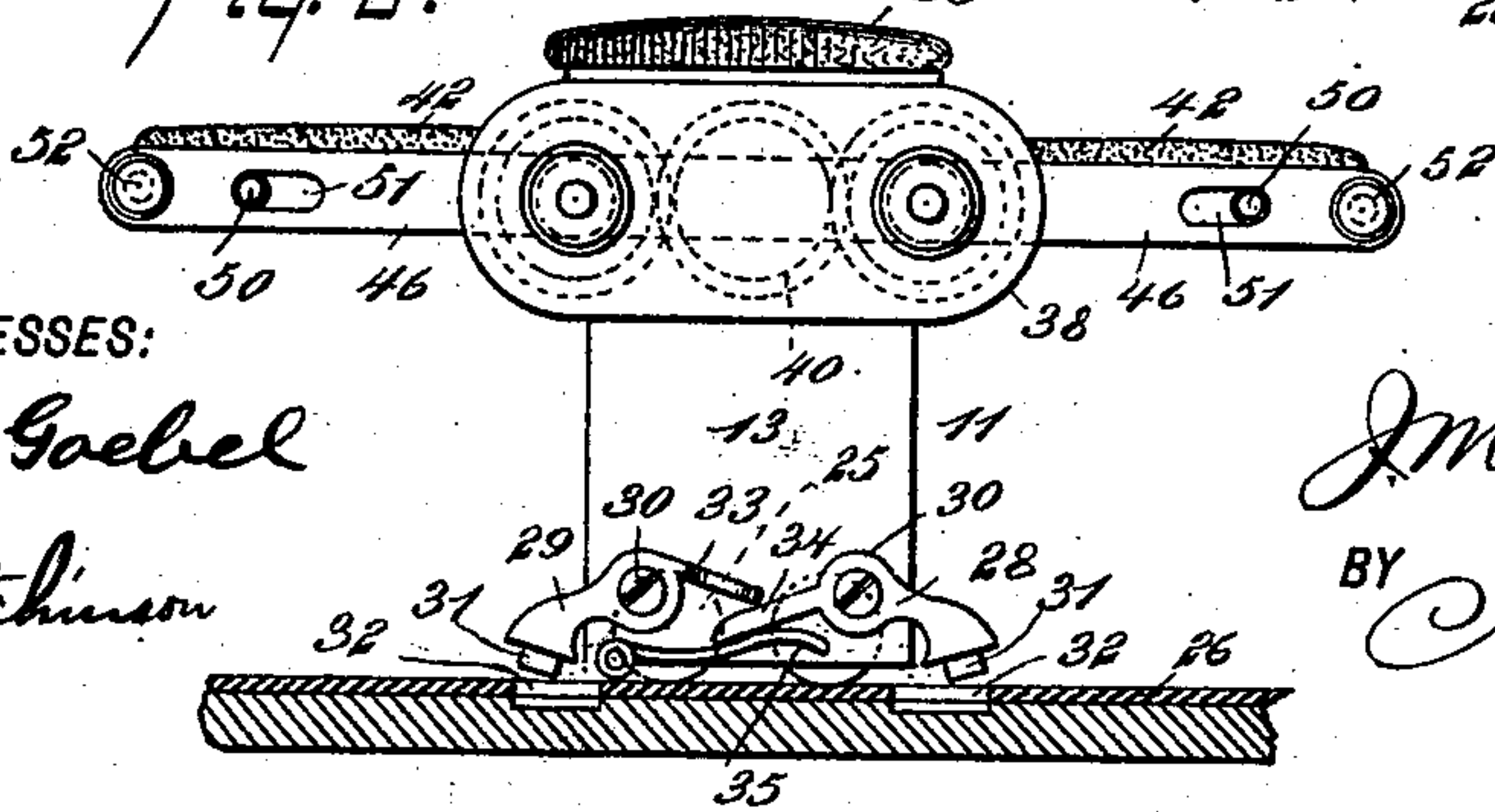


Fig. 5.



WITNESSES:

William Goebel
H. B. Hutchinson

INVENTOR

J. M. Osgood
BY Munn & Co.

ATTORNEYS.

(No Model.)

J. M. OSGOOD.
CAR SEAT.

5 Sheets—Sheet 3.

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Fig. 6.

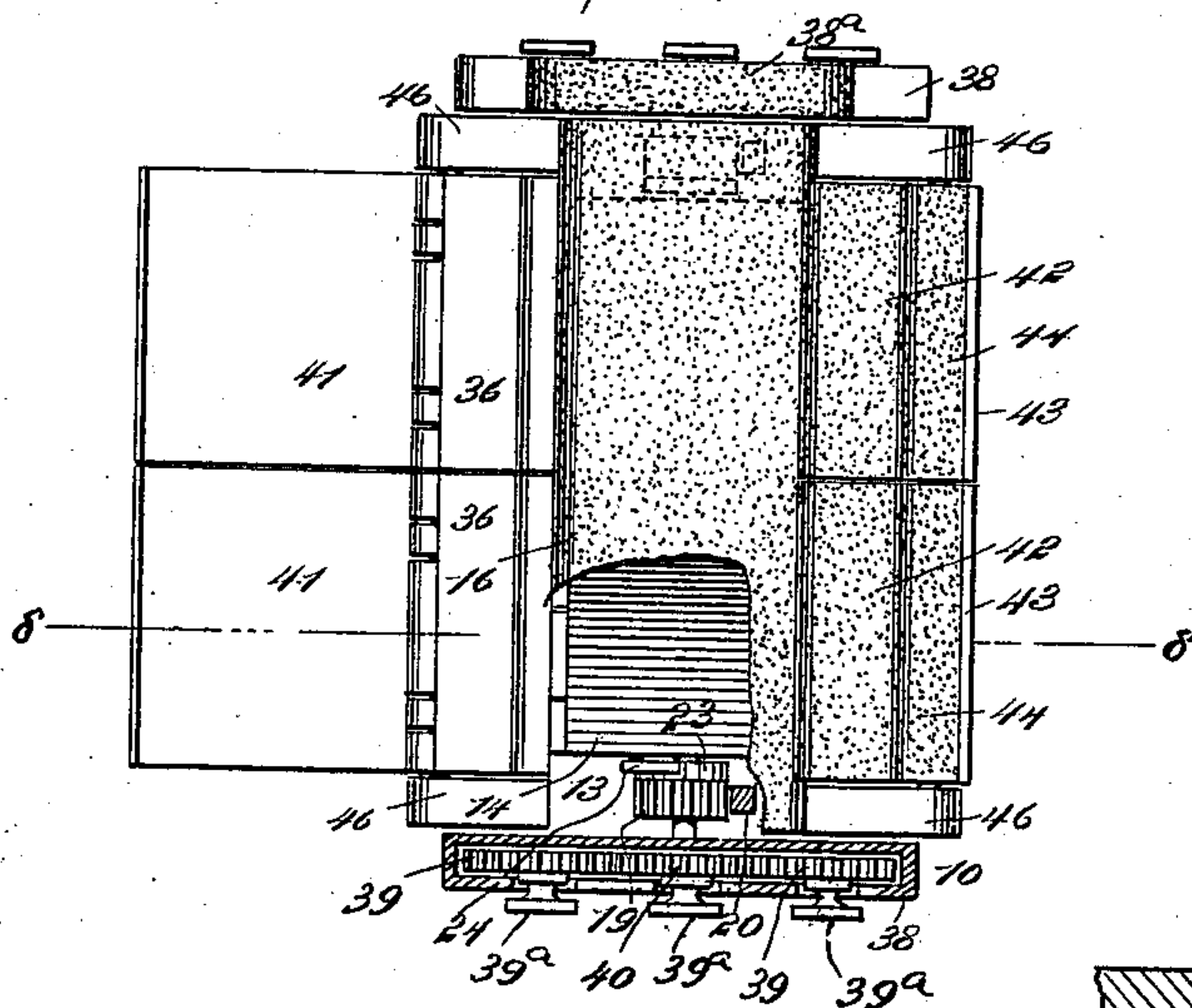


Fig. 7.

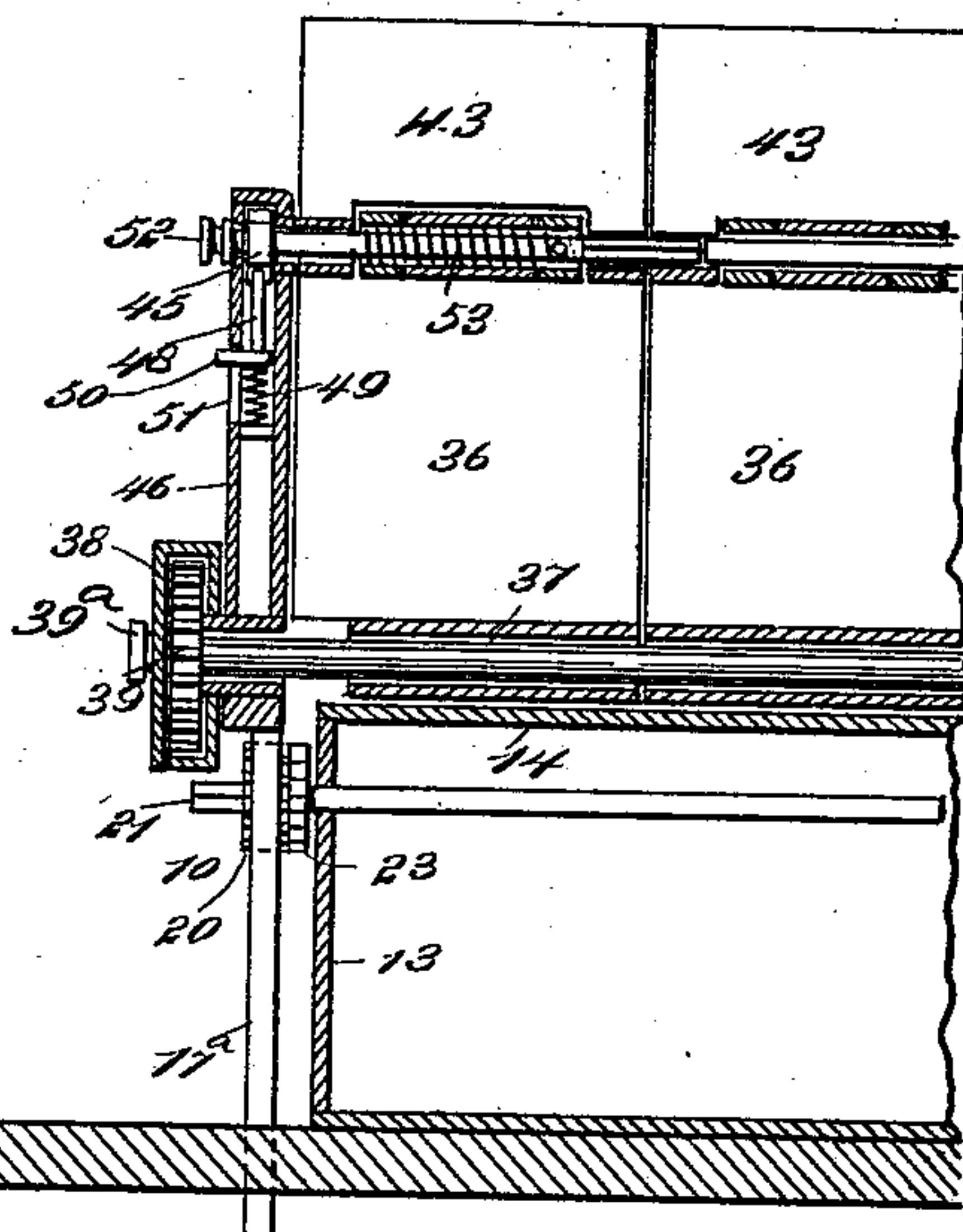


Fig. 8.

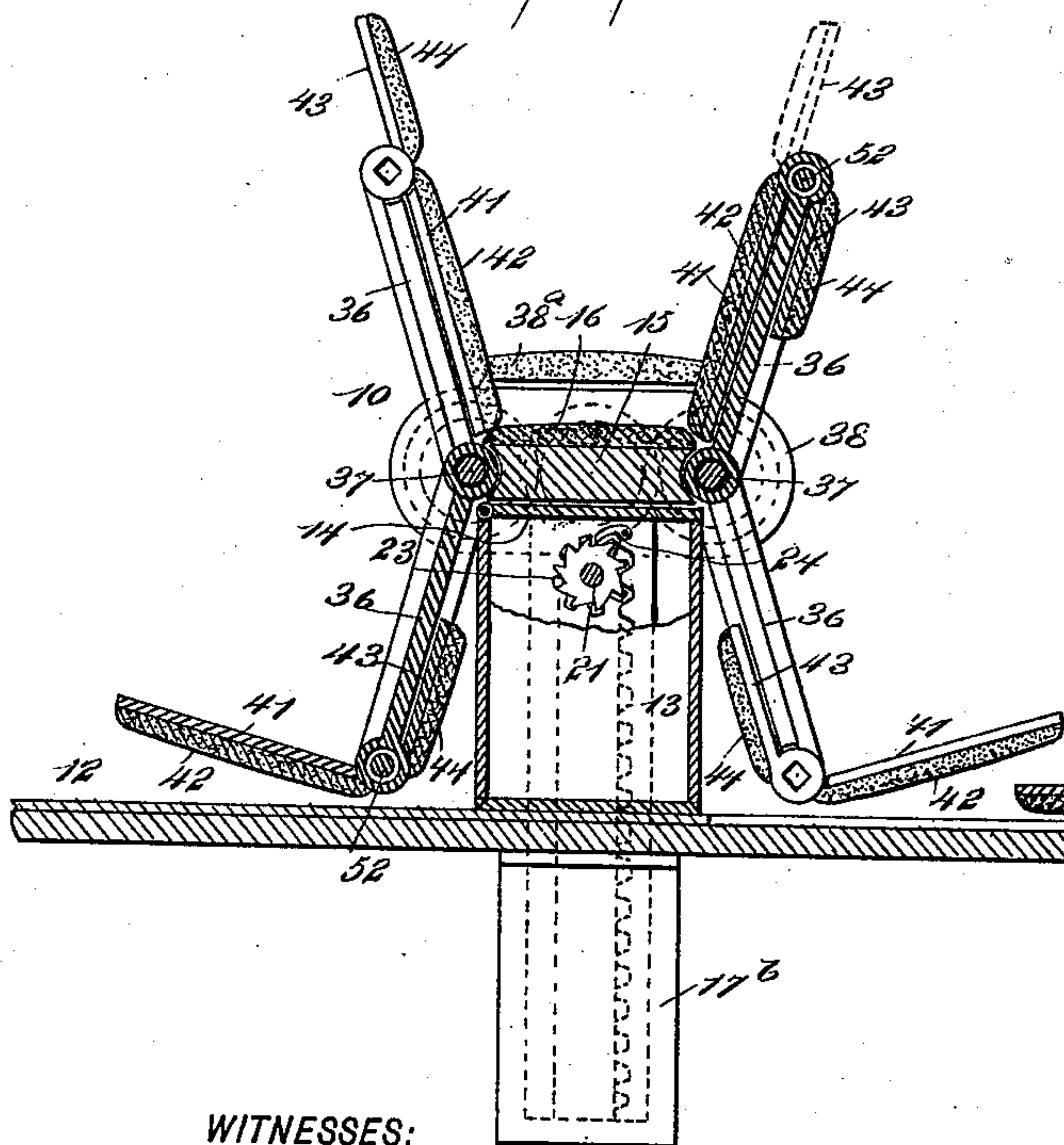
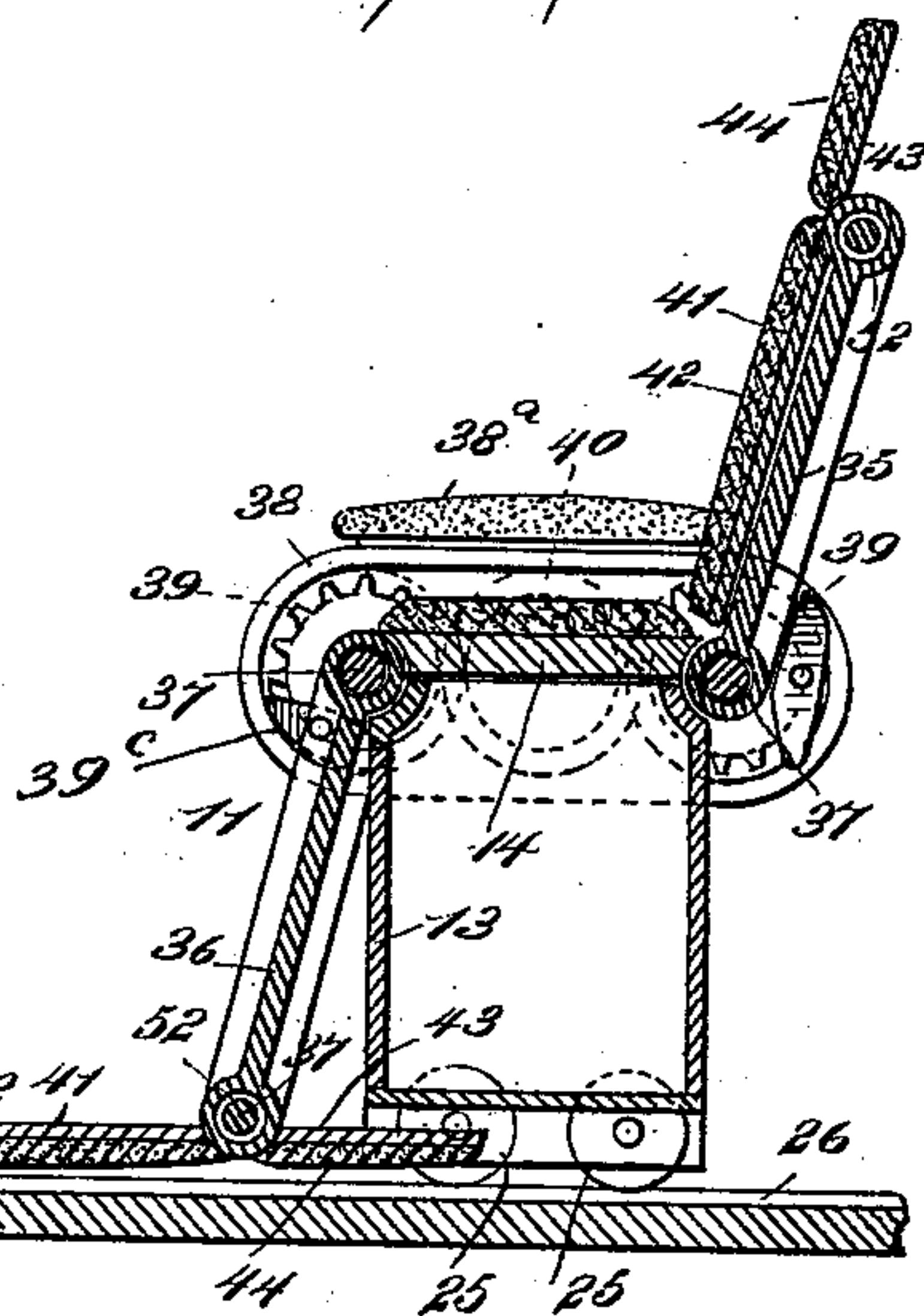


Fig. 9.



WITNESSES:

William Gael
H. P. Hutchinson

INVENTOR

J. M. Osgood

BY

Munn & Co

ATTORNEYS.

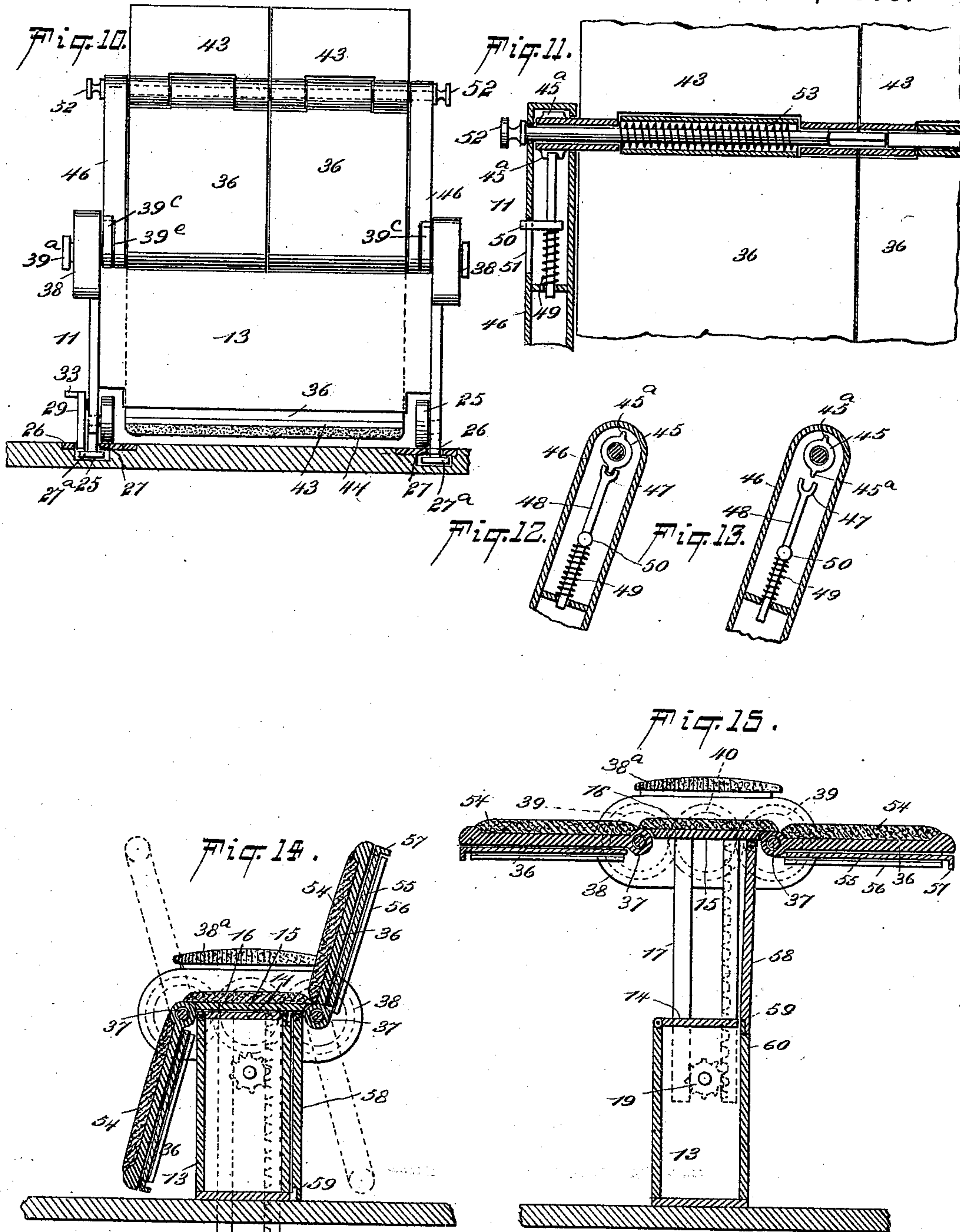
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J. M. OSGOOD.
CAR SEAT.

No. 549,527.

Patented Nov. 12, 1895.



WITNESSES: 71 20

William Goebel.
W. B. Hutchinson

INVENTOR
J. M. Osgood
BY
Munn & Co
ATTORNEYS.

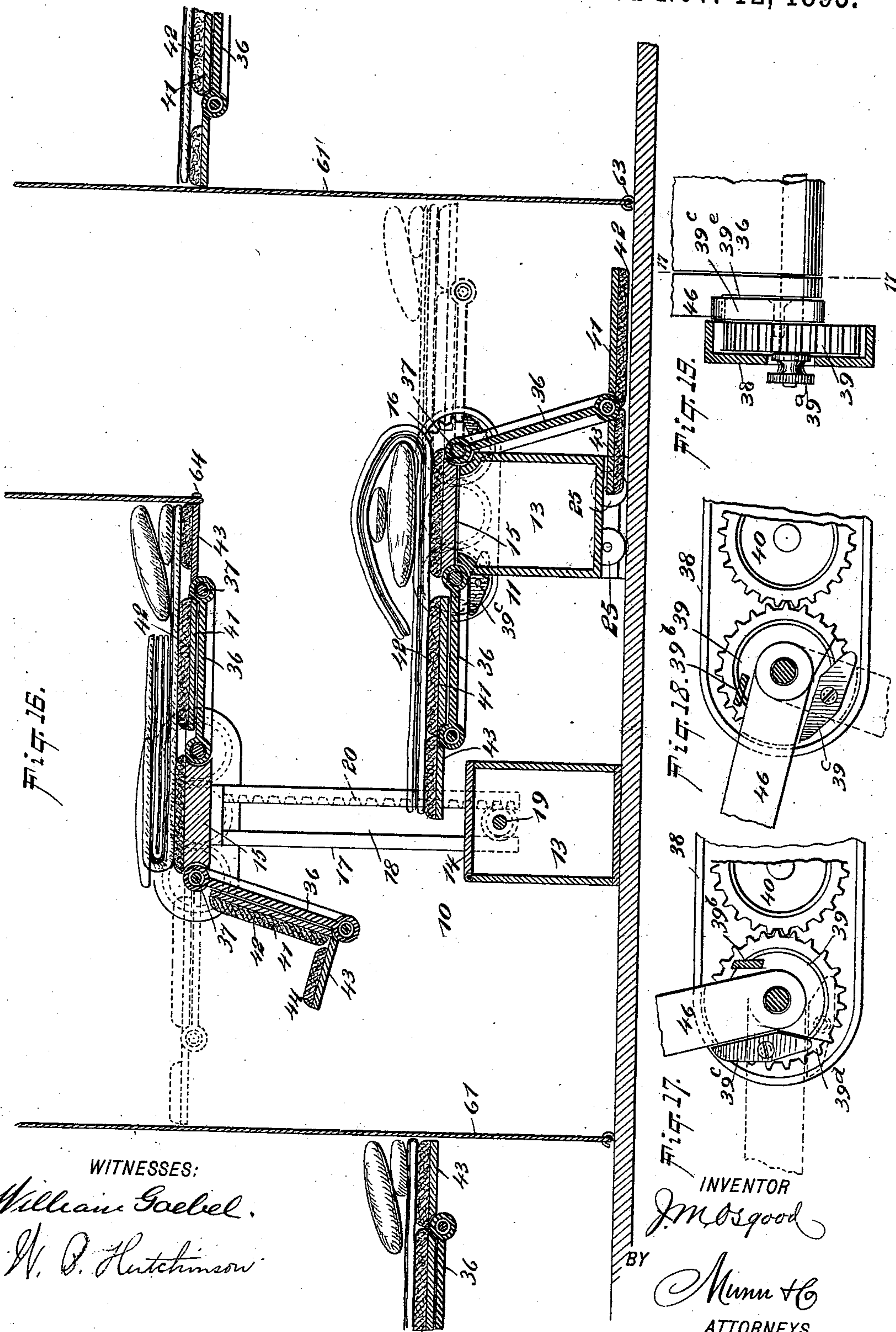
(No Model.)

J. M. OSGOOD.
CAR SEAT.

5 Sheets—Sheet 5.

No. 549,527.

Patented Nov. 12, 1895.



WITNESSES:

William Goebel.

W. O. Hutchinson.

INVENTOR

J. M. Osgood

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES M. OSGOOD, OF BOSTON, MASSACHUSETTS.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 549,527, dated November 12, 1895.

Application filed December 12, 1894. Serial No. 531,588. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. OSGOOD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Car-Seat, of which the following is a full, clear, and exact description.

My invention relates to improvements in car seats or chairs; and the object of my invention is to produce a chair which is especially adapted for use in parlor and sleeping cars, but which may be easily adapted to ordinary day-coaches, and to produce a chair which has reversible and reclining backs adapted to serve alternately as backs and leg-rests, which has the aforesaid backs divided so that each chair may be formed into a tête-à-tête with a half back facing in one direction and the other back in the opposite direction, which has the opposite backs connected by gearing, so that when one back is turned up the other will be turned down and both may be simultaneously moved to a safety position, which has the backs and rests arranged so as to be readily adjustable and convertible into a couch or berth, and which is arranged so that in a car the alternate chairs may be raised to form upper berths and the intermediate chairs moved laterally, thus forming practically a series of state-rooms, in the lower of which is a seat, and which practically gives to each berth a separate dressing-compartment.

A further object of my invention is to produce a chair which is easily shifted from one position to another and which affords a very comfortable seat.

To these ends my invention consists of certain features of construction and combinations of parts which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken sectional elevation of a car provided with a series of my improved seats arranged to be converted into couches and with the chairs in position for day use. Fig. 2 is a similar view, but with the chairs converted into couches and arranged for

night use. Fig. 3 is a broken sectional elevation of two adjacent chairs, one being vertically and the other laterally movable, the chairs being shown in position for day use and the view illustrating the gear connection between the opposite backs. Fig. 4 is a similar section showing the chairs arranged for night use. Fig. 5 is a sectional side elevation of the laterally-movable seat with the seat-backs extended to form a bunk. Fig. 6 is a broken plan view, partly in section, of the vertically-movable chair. Fig. 7 is a broken vertical section on the line 7 7 of Fig. 3. Fig. 8 is a cross-section of one of the vertically-movable chairs arranged to form a tête-à-tête. Fig. 8 is a cross-section of the laterally-movable chair, which is adapted to be placed between two vertically-movable ones. Fig. 10 is a rear elevation of the laterally-movable chair. Fig. 11 is a detail cross-section showing the manner in which the extension backs or head-rests are held and fastened. Fig. 12 is a detail sectional view showing the locking device in position to fasten a head-rest. Fig. 13 is a similar view, but with the head-rest unfastened. Fig. 14 is a cross-section of a modified form of the chair in position for day use. Fig. 15 is a sectional elevation of the chair shown in Fig. 14 with the chair raised and converted into a couch. Fig. 16 is an enlarged detail sectional view showing the arrangement of the seats when converted into bunks or berths. Fig. 17 is an enlarged detail view on the line 17 17 of Fig. 19, showing the means for holding a seat-back in position, the view showing the seat-back raised. Fig. 18 is a similar view with the seat-back in a nearly horizontal position, and Fig. 19 is a detail cross-sectional view of the construction shown in Figs. 17 and 18.

The parlor sleeping-car 12 is fitted with alternating seats 10 and 11, the former of which is vertically movable to enable it to be converted into an upper berth or couch, as hereinafter described. Each seat is mounted on a box 13, which is provided with a lid 14, and this box may be utilized for holding the bed-clothing. The seat is provided with a bottom or seat portion 15, which is upholstered, as shown at 16, and which lies on the box 13, and the bottom or seat portion 15 forms the lid or

cover of the box 13 of the seat 11. The bottom 15 is, on the vertically-movable chairs 10, carried by end posts 17, which are longitudinally slotted, as shown at 18, so as to straddle the gears 19, each of which engages a rack 20 on one side of the post 17, and thus by turning the gear 19 the post may be moved up or down, sliding as it moves in a guiding-slideway 17^a, and when the post is moved to its lowest position it projects through the car-floor and into a box 17^b. The shaft 21 of each gear 19 is squared at its outer end, as shown in Fig. 7, so that a wrench may be conveniently applied to the shaft to turn it and the gear. Each gear or cog wheel 19 is provided with a ratchet-wheel 23, (see Figs. 6 and 8,) which is engaged by a pawl 24, and this prevents the cog-wheel from turning back and permitting the upper couch to settle after it is raised.

The chair 11 is laterally movable, and to this end the box 13 has at the ends antifriction-trucks 25, which may be flanged and which run on metal tracks 26, these being longitudinally slotted, as shown at 27, to receive the ends of the boxes 13 of the seats 11, which ends are prolonged so as to extend down through the slot, as shown clearly in Fig. 10, and the ends have bottom flanges 27^a, which overlap the sides of the slots and prevent the displacement of the box ends, and the boxes 13 and seats 11 are thus accurately guided and securely held. The seat 11 is held in a desired position by means of retaining-dogs 28 and 29, which are pivoted on the outer end of the box 13, as shown at 30 in Figs. 2, 4, and 5, and these dogs are provided with lugs 31 to enter notches 32 in the tracks 26, thus fastening the chair. One of the dogs is provided with a thumb-piece or handle 33, which on being depressed releases the dog, and this thumb-piece overlaps the shank 34 of the dog 28, while both shank and thumb-piece are normally pressed upward by a spring 35 beneath the shank. This arrangement enables the chair to be pushed to one side for day use, and for use after the bed is made the chair or seat may be pushed back to the position shown in Fig. 4.

The bottom 15 of each chair has hinged to opposite edges reversible backs 36, which are preferably double, as shown in Fig. 7, to enable the chair to be converted into a tête-à-tête, as presently described, these backs being hung on pintles or shafts 37, which project into casings 38 at the ends of the chair. On these casings are the upholstered arms 38^a of the chair. The backs 36 are connected with gear-wheels 39, contained in the said casings 38, and the opposite gear-wheels 39 in each casing are connected by an intermediate gear-wheel 40, and the backs 36 are arranged so that when one is raised to position for use the other will be depressed to serve as a leg-rest, and being connected by gears they of course move in unison, and hence when one is moved the other has a corresponding but opposite movement, and the chair may

thus be easily reversed, or the backs may be straightened out, as shown by dotted lines in Fig. 3, to form the bed portion of a berth. On the outer ends of the shafts of the gear-wheels 39 and 40 are thumb-screws 39^a, which when tightened up bind against the gear-wheels and force the gear-wheels against the sides of the case 38, and in this way the thumb-screws act as brakes by which the movement of the backs 36 may be controlled, the loosening of the thumb-screws permitting the backs to turn easily and the tightening of the thumb-screws holding the backs in place. On the side edges of the backs 36 are casings 46, which move in unison with the backs and which are to be more specifically described hereinafter, and these casings when turned in one direction abut with stops 39^b on the gear-wheels 39, so that when moved in the direction of the stops the gear-wheels are turned by the casings and back, and the casings are held against the stops by dogs or pawls 39^c, which are pivoted in recesses 39^d in the gear-wheels, (see Figs. 17 and 19,) and these pawls are adapted to pass through recesses 39^e in the casings 46, (see Fig. 19;) but normally the dogs or pawls engage the casings and hold them against or nearly against the abutments or stops 39^b, (see Fig. 17,) so that when the casings and seat-backs are turned against the dogs 39^c the gear-wheels 39 and 40 will be also turned. When, however, it is desired to drop one of the seat-backs, as shown in Fig. 16, without disturbing the opposite seat-back, the seat-back and casing 46 to be lowered are first raised slightly, so as to disengage the casing from the pawl 39^c, (see Fig. 18,) and the pawl 39^c is pressed, so as to turn it on its pivot toward the casing and enable it to enter the recess 39^e, (which will be readily understood by reference to Figs. 17 and 18, in which the outer end of the recess 39^e is indicated in dotted lines,) after which the casing 46 and the seat-back 36, connected therewith, may be freely dropped without affecting the rest of the apparatus, as the pawl 39^c will slip through the recess 39^e of the casing 46 without being engaged thereby, and consequently the gear-wheel will not be turned.

To the outer edges of the backs 36 are hinged the foot-rests 41, which on the under or outer sides are upholstered, as shown at 42, and thus when the foot-rests are folded against the backs 36 they form a back-cushion for the chair, and when they are folded outward and downward the upholstering comes on the under side, out of contact with the feet, while the inner portion of the foot-rest is adapted to support the feet and extends at practically right angles to the back 36. Each back 36 is also provided with an extension head-rest 43, which on the outside is upholstered, as shown at 44, and this head-rest may be folded over against the rear side of the back 36, as shown at the right hand in Fig. 8, or may be elevated to form an extension of the main chair-back, as shown at the left hand in the same figure, and

this latter position is the position which the head-rest assumes when the apparatus is converted into a couch, as shown in Fig. 4.

The head-rest 43 may be made independent of the foot-rest 41, as shown on the chair 11, or it may be formed integral with the said foot-rest, as shown on the chair 10, and when thus formed the head-rest will always be extended to form a continuation of the back when the foot-rest is folded against the back, as shown in the upper part of Fig. 9, and when the foot-rest is turned down, as shown in the lower portion of the same figure, the head-rest will extend inward at an angle to the back 36.

The head-rests 43 are made of the same width as the backs 36, and each rest has its hinge-leaf projected at one end and provided with a cog-wheel 45, having opposite teeth 45^a, this cog being held in a casing 46, which extends parallel with the back 36 and is connected with the hinge of the said back, and in this casing is a catch 47 to engage the teeth 45^a, (see Figs. 12 and 13,) the catch being formed on the end of a slide-rod 48, which is pressed by a spring 49, so as to pass into engagement with one of the teeth, and the rod has a push-button 50 extending outward through a slide-slot 51 in the casing 46, (see Fig. 5,) and thus when the head-rest is to be turned the push-button and slide-rod may be pushed back to disengage a tooth 45^a, and the head-rest may then be freely turned.

The head-rests 43 are hung on pintles 52, which project outward through the casings 46 and which are returned by springs 53, one of the pintles extending through the hinge-leaf of one of the head-rests and into the hinge-leaf of the opposite rest, and so the pintle serves to hold the two head-rests and the two backs 36 together, as in Fig. 11; but when they are to be changed to form a tête-à-tête the pintle 52 is pulled outward, so that one of the backs and its head-rest may be reversed and the other left in its original position. If desired, the chair may be made as shown in Figs. 14 and 15 and may be made either vertically movable or stationary. As illustrated, however, the modified form of chair has the lifting mechanism already described and has the backs 36 made single and upholstered on the inner side, as shown at 54. Each of these backs is provided with an extension 55, which moves in a slideway 56 on the back and has a front piece 57 to enable it to be pulled out, so as to form a foot-rest when the chair is converted into a couch and the backs are placed horizontally, as in Fig. 15.

To support the chair in its raised position, the bottom 15 is provided with a drop-plate 58, hinged to the under side of the bottom and rabbeted at its lower edge, as shown at 59, so as to fit a shoulder 60 on one side of the box 13, and thus when the drop-plate is fitted upon the box side, as the drawings show, the seat or bunk is supported rigidly

and cannot drop. When the chairs are arranged, as in Figs. 1 and 2, for a parlor-car, a curtain 61 is hung above the chairs, so as to be dropped between every two of them, and these curtains are adapted to be pulled down, so as to divide the car into a series of berths or compartments, the curtains being adapted to alternately engage hooks 63 on the floor and buttons 64 on the ends of the upper bunks. (See Fig. 16.) These curtains are hung in the ordinary fixtures and are adapted to enter casings 65, which are secured to hangers 66 on the car-top.

The berths may be provided with the ordinary curtains, such as are used in the ordinary sleeping-car, and when the berths are made up for the night they are arranged as shown in Fig. 16, the seat 11 being moved so that the lower and upper berths will partially overlap. The seat-bottom 15 of the upper berth is raised by turning the gear-wheel 19 in the manner already described. The seat-backs 36 of the said berth are turned to a horizontal position, and the seat-backs of the lower berth or seat 11 are also turned to a horizontal position with the head-rests extended. The bedclothing is arranged upon the berths in the usual way and is then turned back over the seat-bottom 15 of the upper berth, and the dog or pawl 39^c, beneath the seat-back 36, next the foot of the berth, is pressed so as to drop the seat-back to the position shown in Fig. 16, and this, with the rest 43, extended as shown in the same figure, forms a seat for the occupant of the berth and provides space for a dressing-room. When the occupant wishes to retire, the seat-back 36 is raised to a horizontal position, the dog 39^c automatically engaging the casing 46, so as to hold the casing and seat-back in a horizontal position, and the rest 43 is also dropped to a horizontal position, after which the bedclothing is straightened out in the customary manner. The lower berth is made up and used in a very similar way, except that the back 36 next the head of the berth is dropped to make space for a dressing-room, and when the berth is to be occupied the back is raised to a position shown by dotted lines in Fig. 16 and the bedclothing straightened out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A car chair mounted on rollers and provided with downwardly extending projections adapted to engage slots of tracks on which the rollers are adapted to run, substantially as described.

2. A car chair comprising a bottom portion, backs hinged to opposite edges thereof, a motion-transmitting device whereby both backs are caused to move simultaneously but in opposite direction, and a movable connecting device whereby one of the backs may be coupled to, or uncoupled from, the said motion-trans-

mitting device, to permit of independent movement of the said back, substantially as described.

3. A car chair, comprising a bottom portion,
5 two reversible backs located one at each end of the bottom portion to form a back for one portion thereof and mounted to swing in different planes adjacent to each other so that the two backs can be swung side by side so as to practically form a single back, and a movable part
10 secured to one of the backs and constructed to engage the other back to compel it to move in unison with the first named back, said movable part when withdrawn from engagement
15 with one of the backs permitting the said back to be reversed independently of the other back, whereby the chair may be converted into a tête-à-tête, substantially as described.

4. The combination, with the sliding chair,
20 of the spring-pressed retaining dogs thereon and constructed to engage a relatively stationary part of the car to hold the chair against

sliding movement, and means for simultaneously operating the dogs, substantially as described.

5. A chair, provided with a bottom portion, two reversible backs, and a rod slidably mounted on one of the backs and constructed to engage the other back, substantially as described.

6. A car provided with chairs convertible into berths, alternate chairs being vertically movable to form upper berths, and the other chairs being slidable toward and from the said vertically movable chairs, the lower berths
35 when in position for use, extending partly under the upper berths, and projecting beyond the same at one end, so as to afford a free space above the said end of the lower berth to the top of the car, substantially as described.

JAMES M. OSGOOD.

Witnesses:

H. W. GILE,
S. P. MEERYECK.