

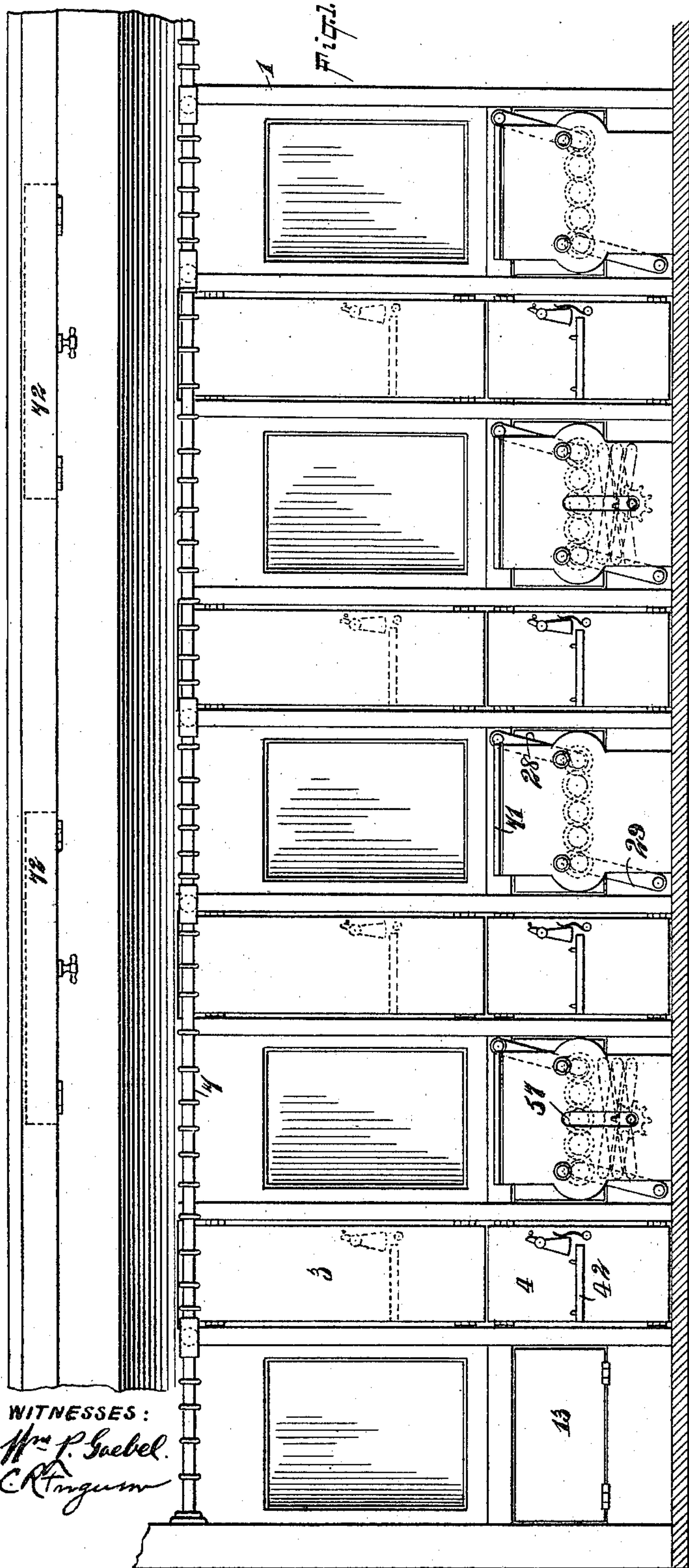
(No Model.)

5 Sheets—Sheet 1.

J. M. OSGOOD.
PARLOR AND SLEEPING CAR.

No. 579,005.

Patented Mar. 16, 1897.



WITNESSES:

H. P. Gaebel.
C. F. Ferguson

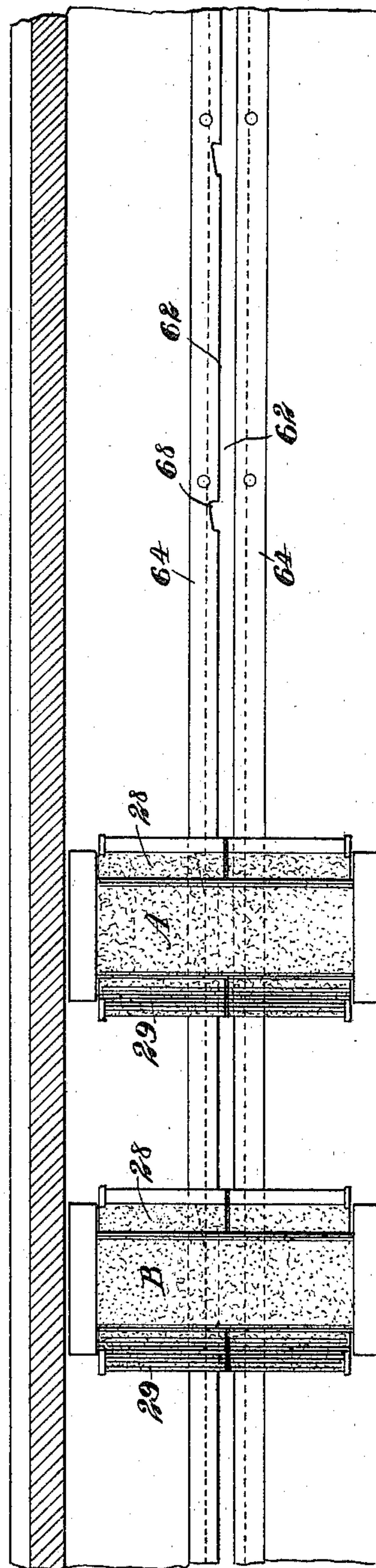


Fig. 2

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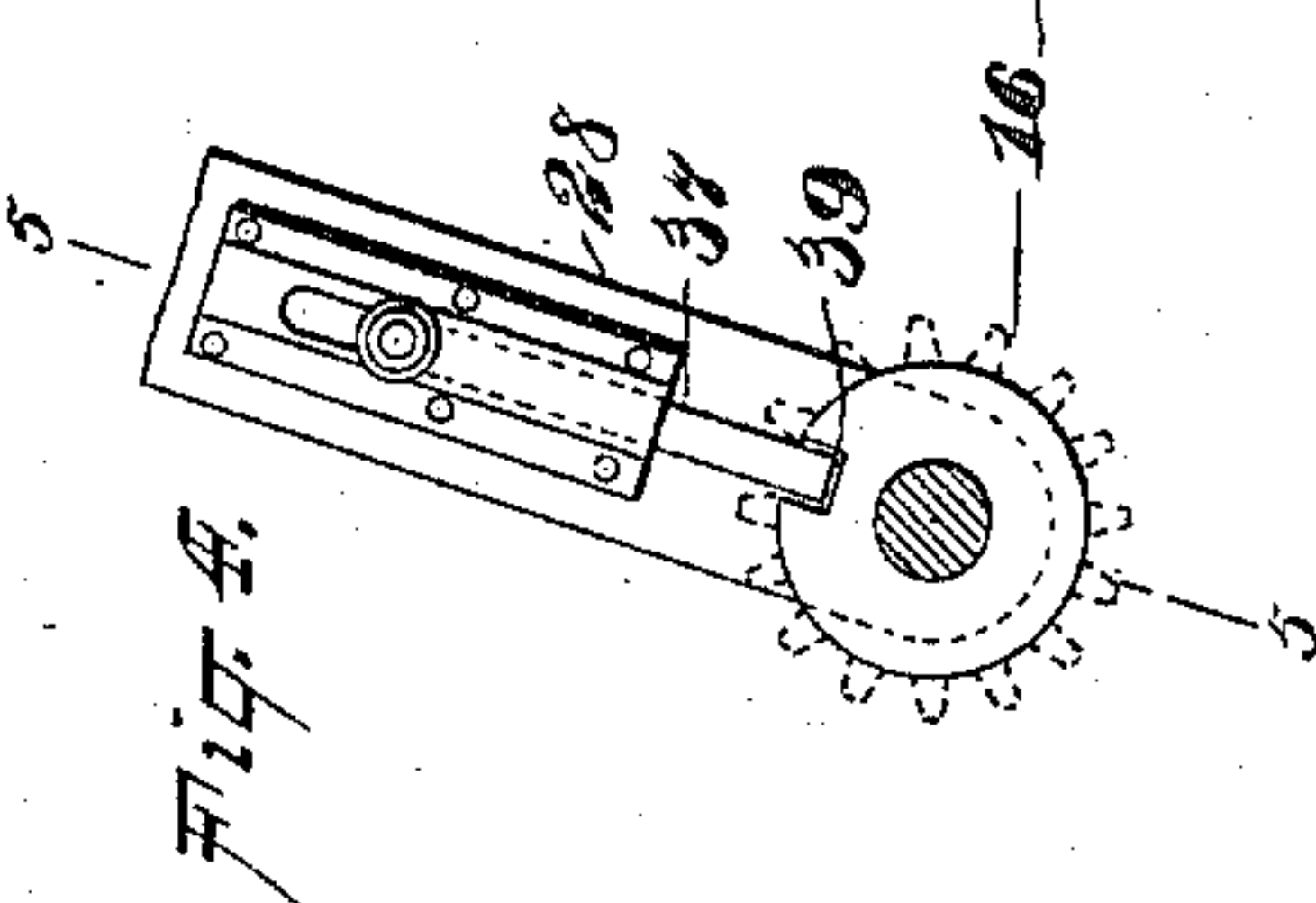
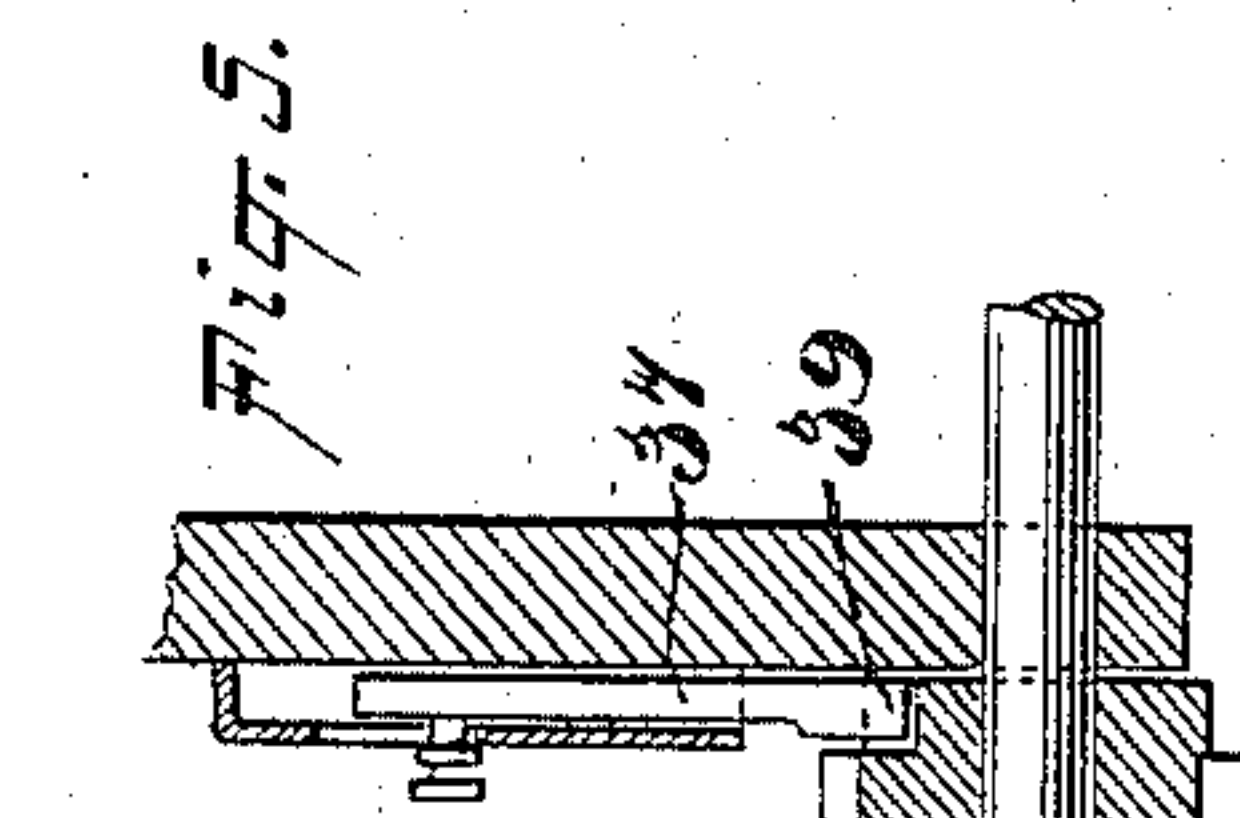
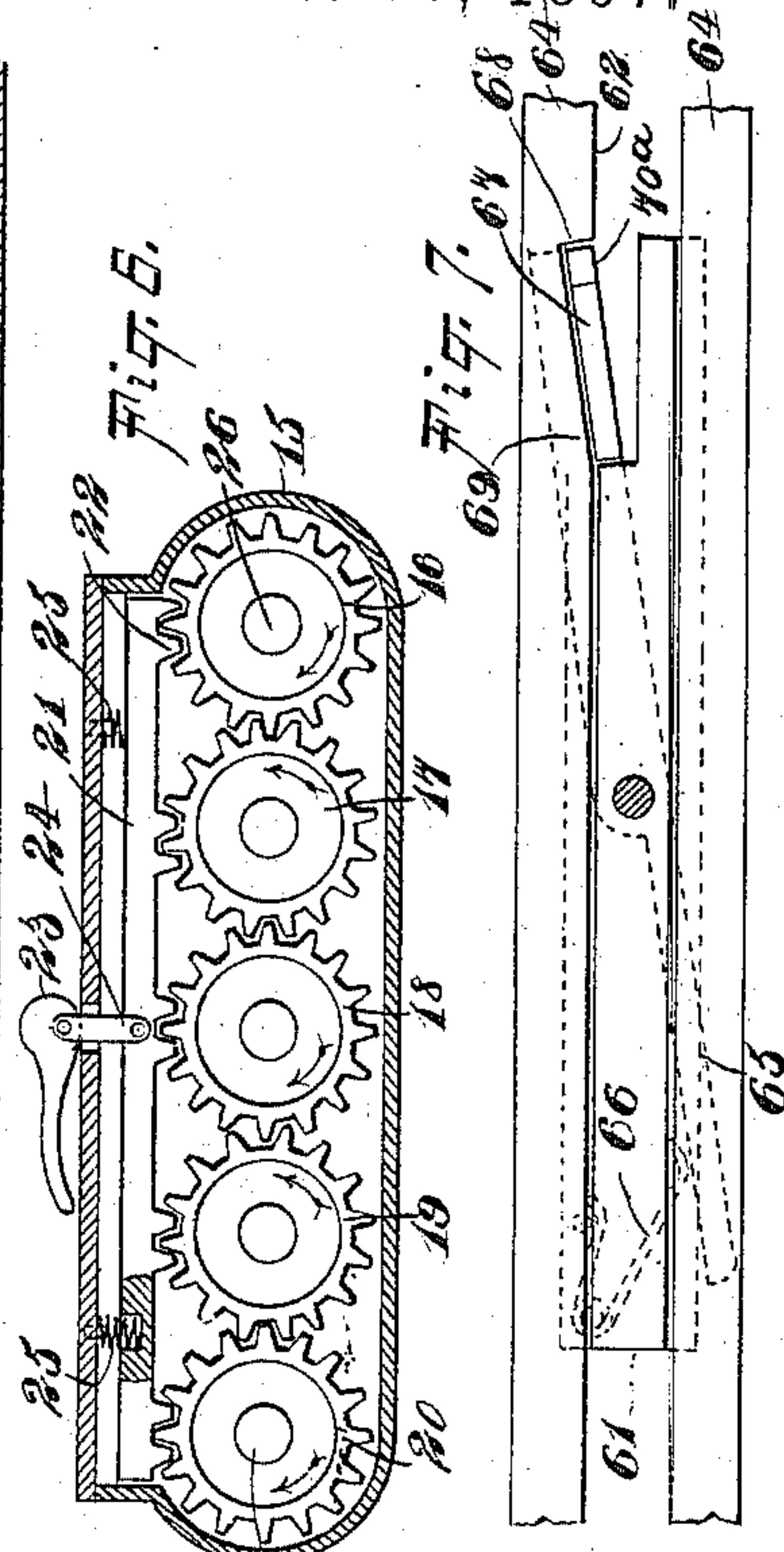
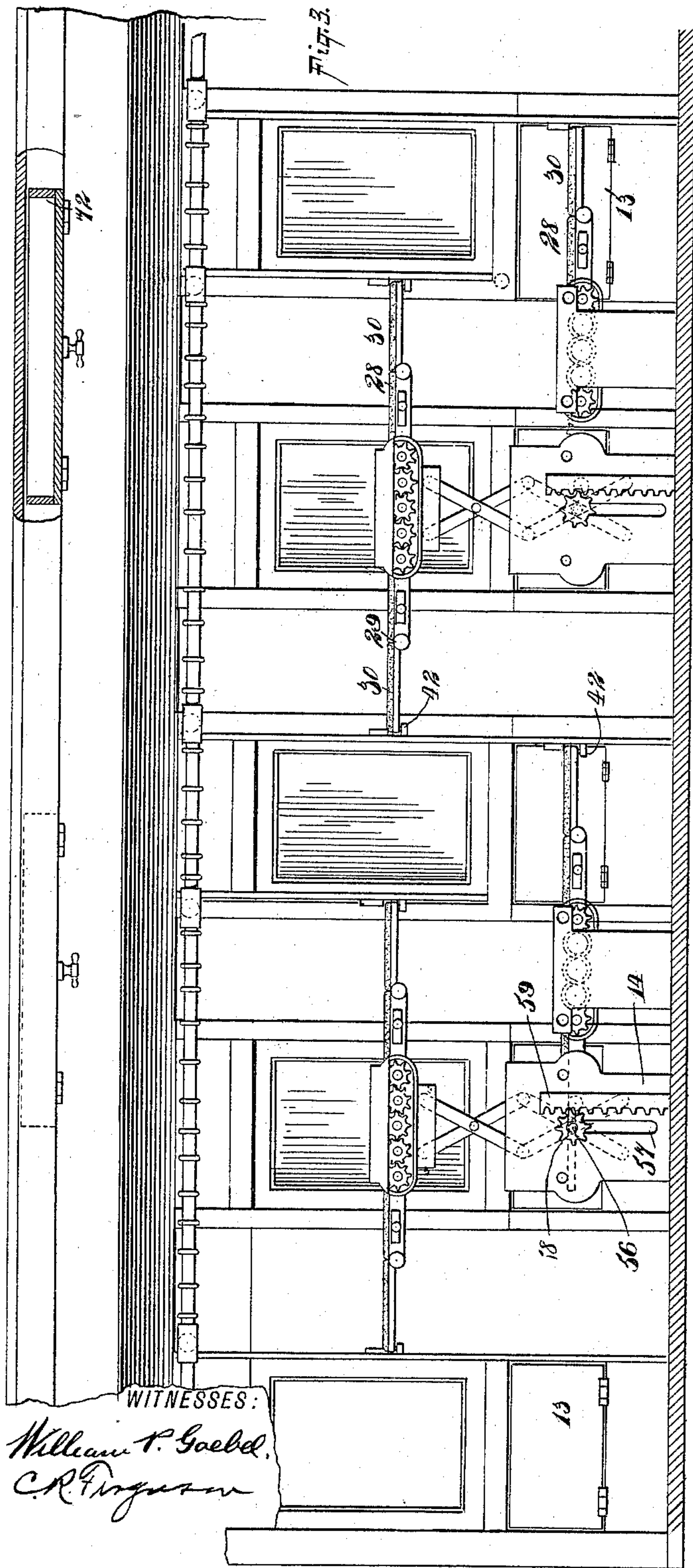
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5 Sheets—Sheet 2.

J. M. OSGOOD.
PARLOR AND SLEEPING CAR.

No. 579,005.

Patented Mar. 16, 1897.



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(No Model.)

5 Sheets—Sheet 3.

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Fig. 8.

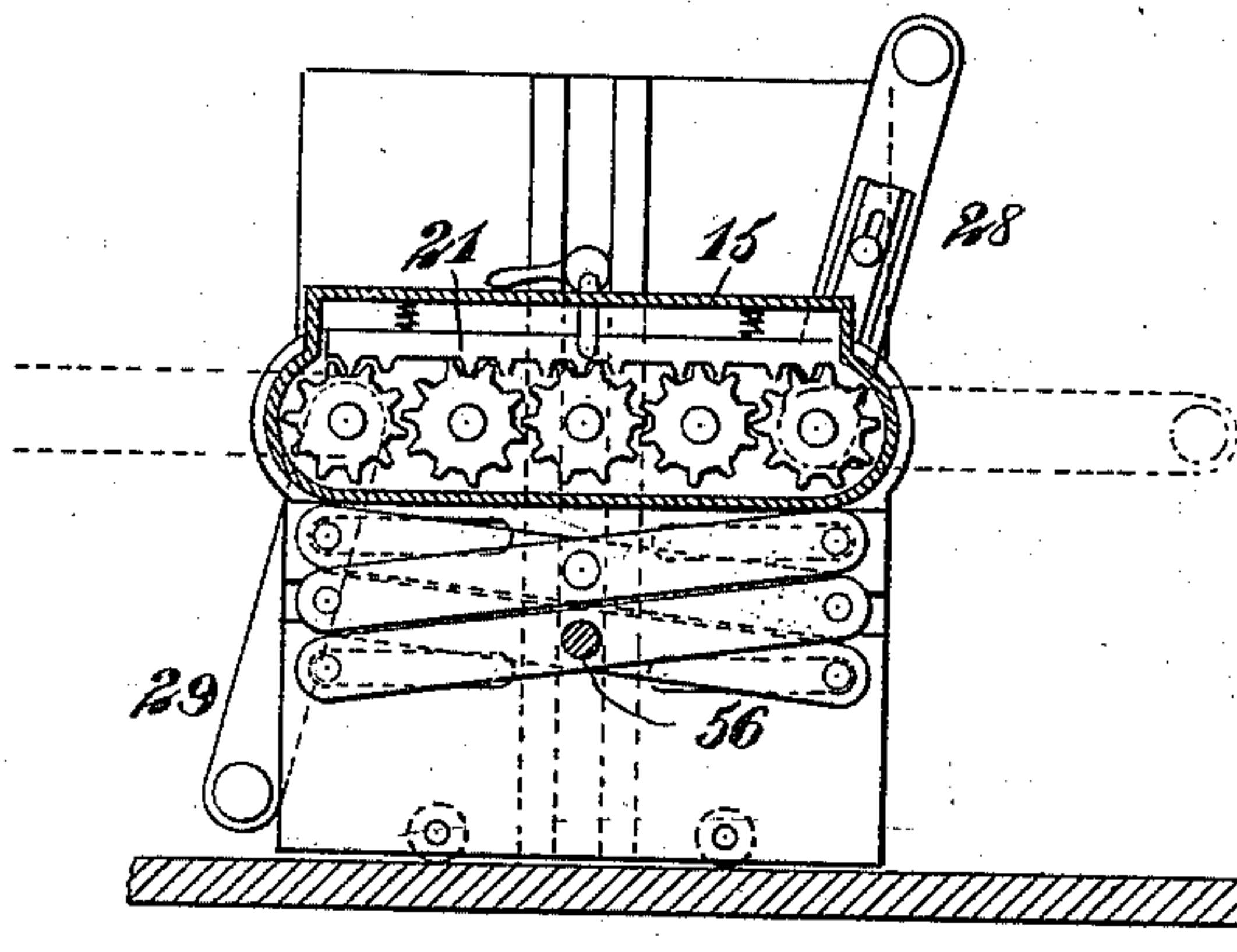


Fig. 9.

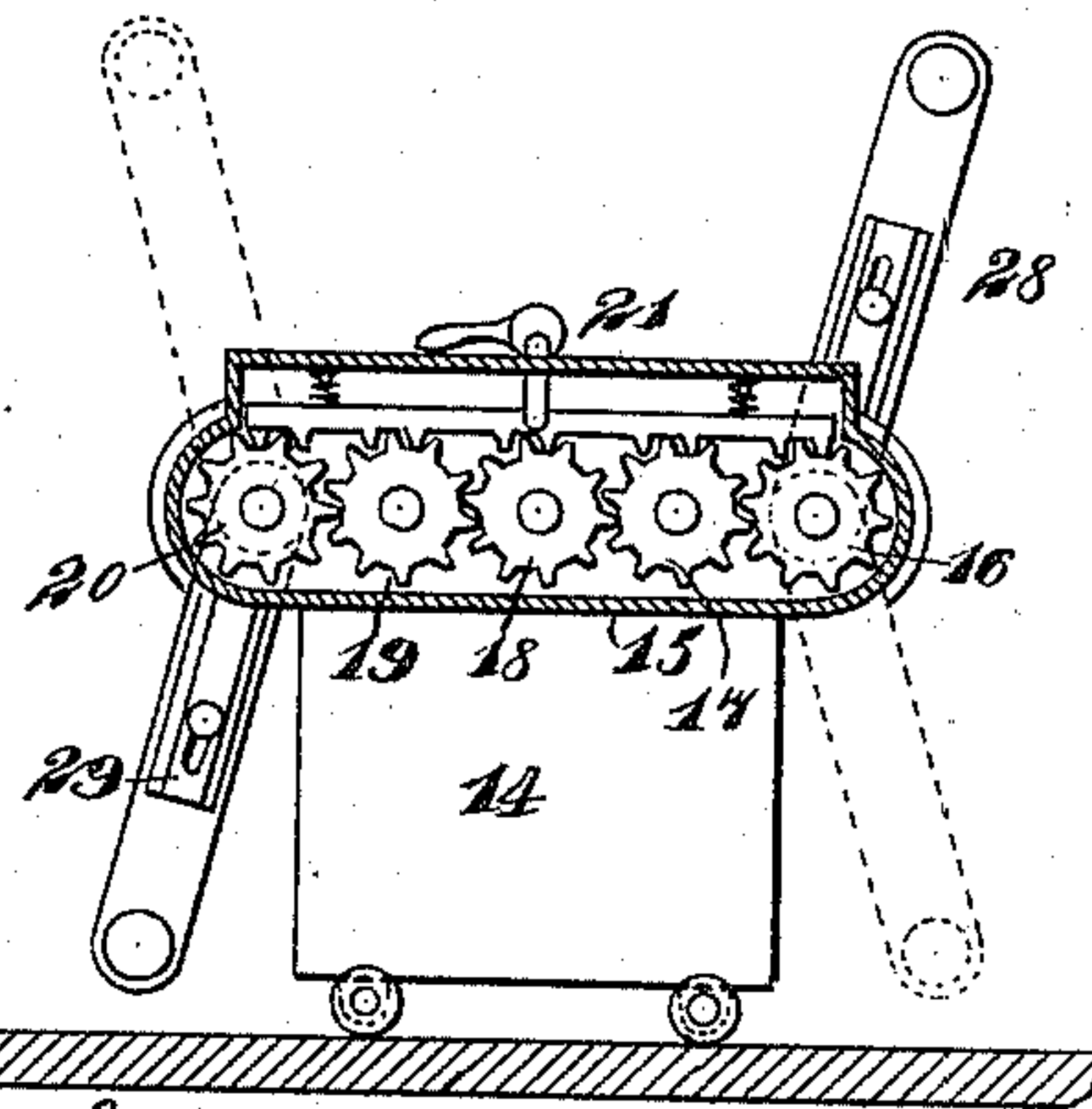


Fig. 10.

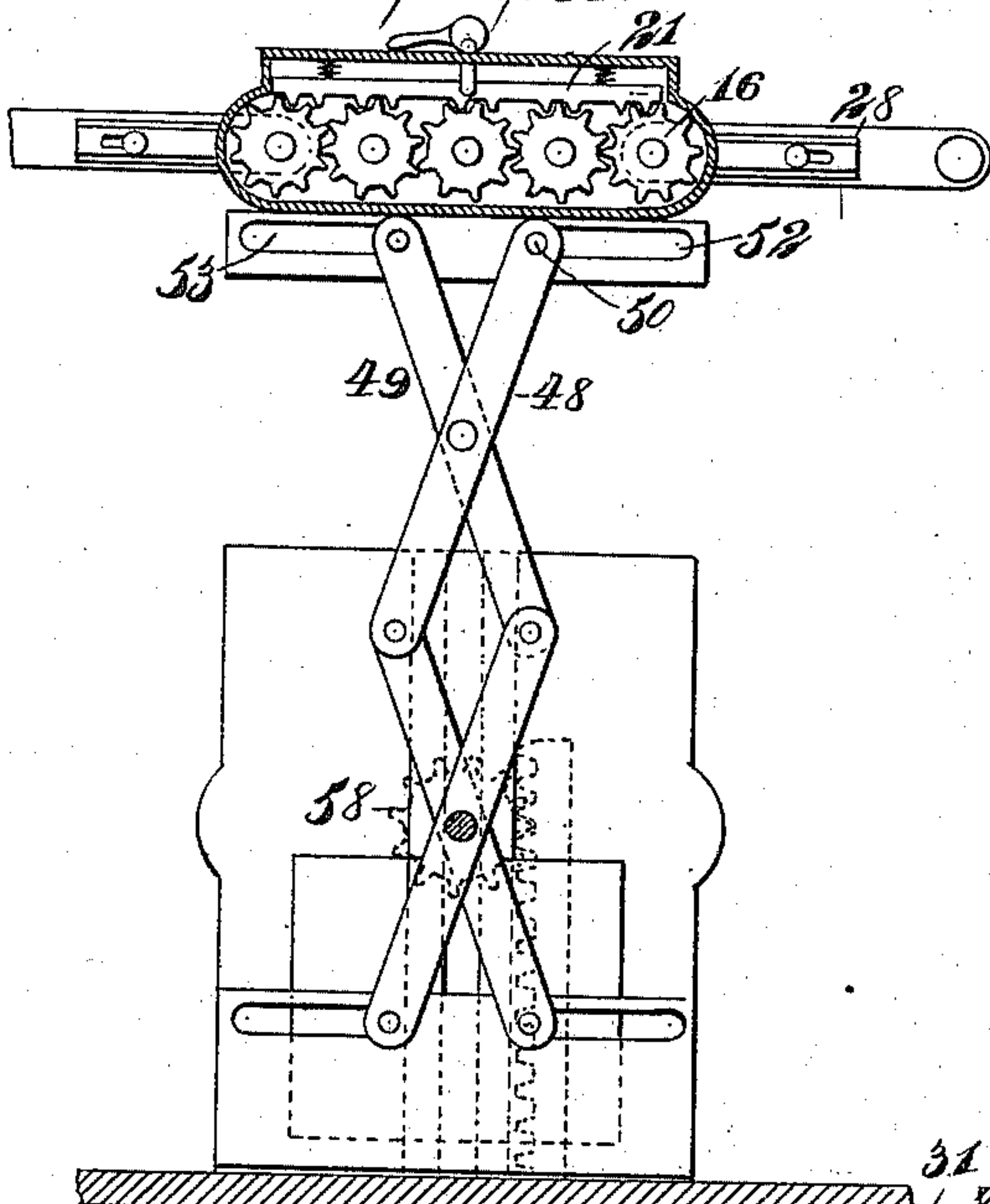


Fig. 11.

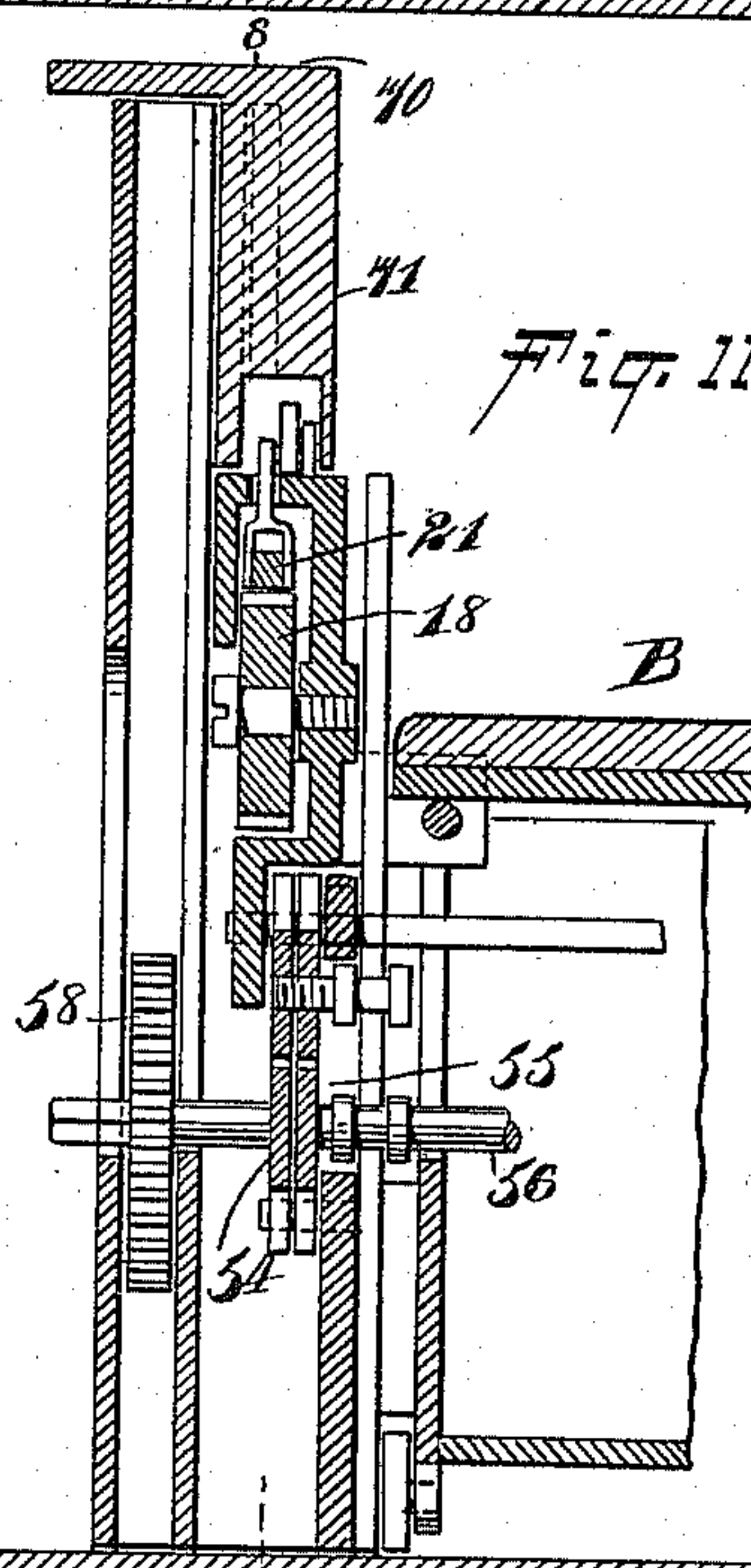
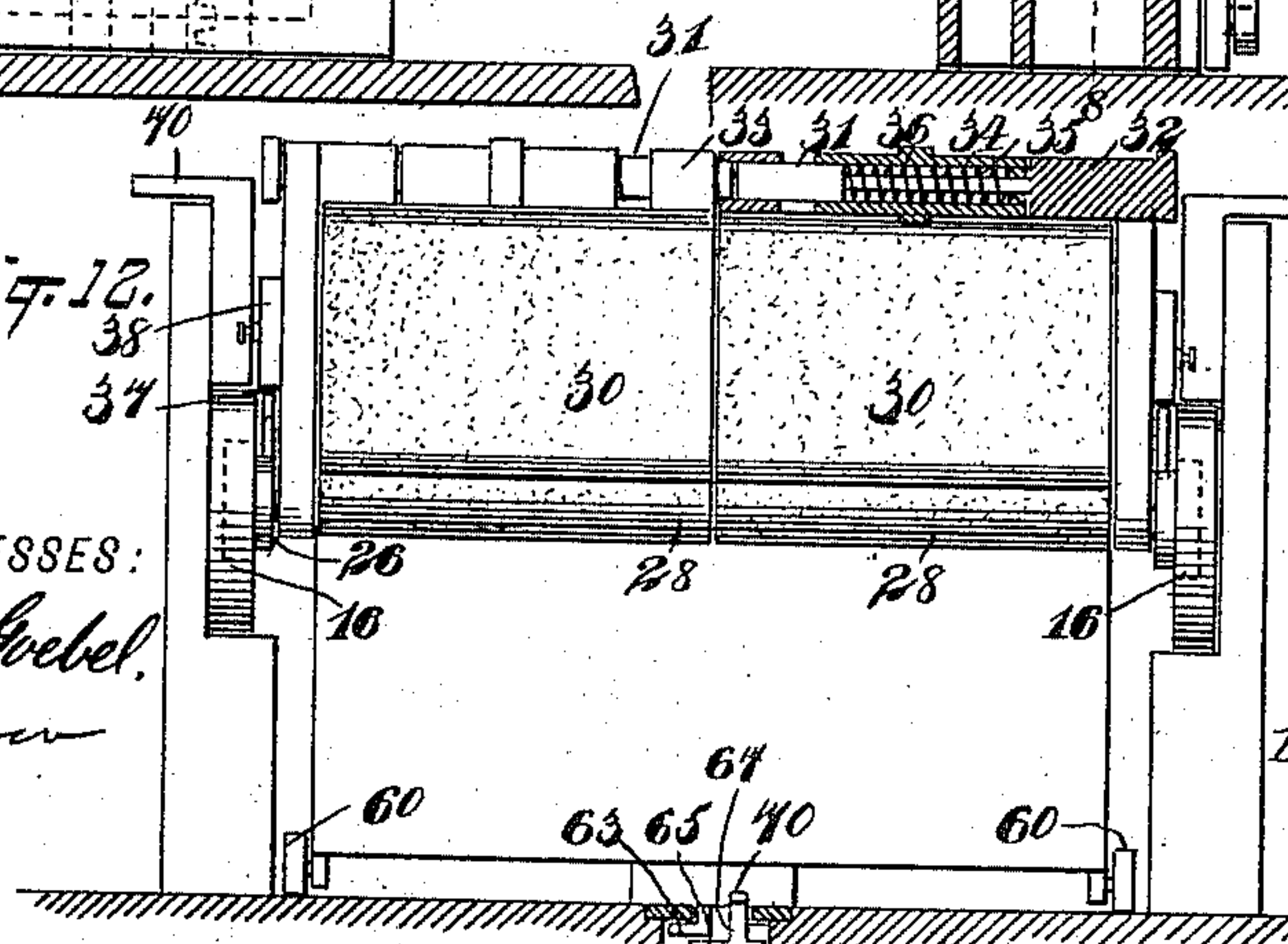


Fig. 12.



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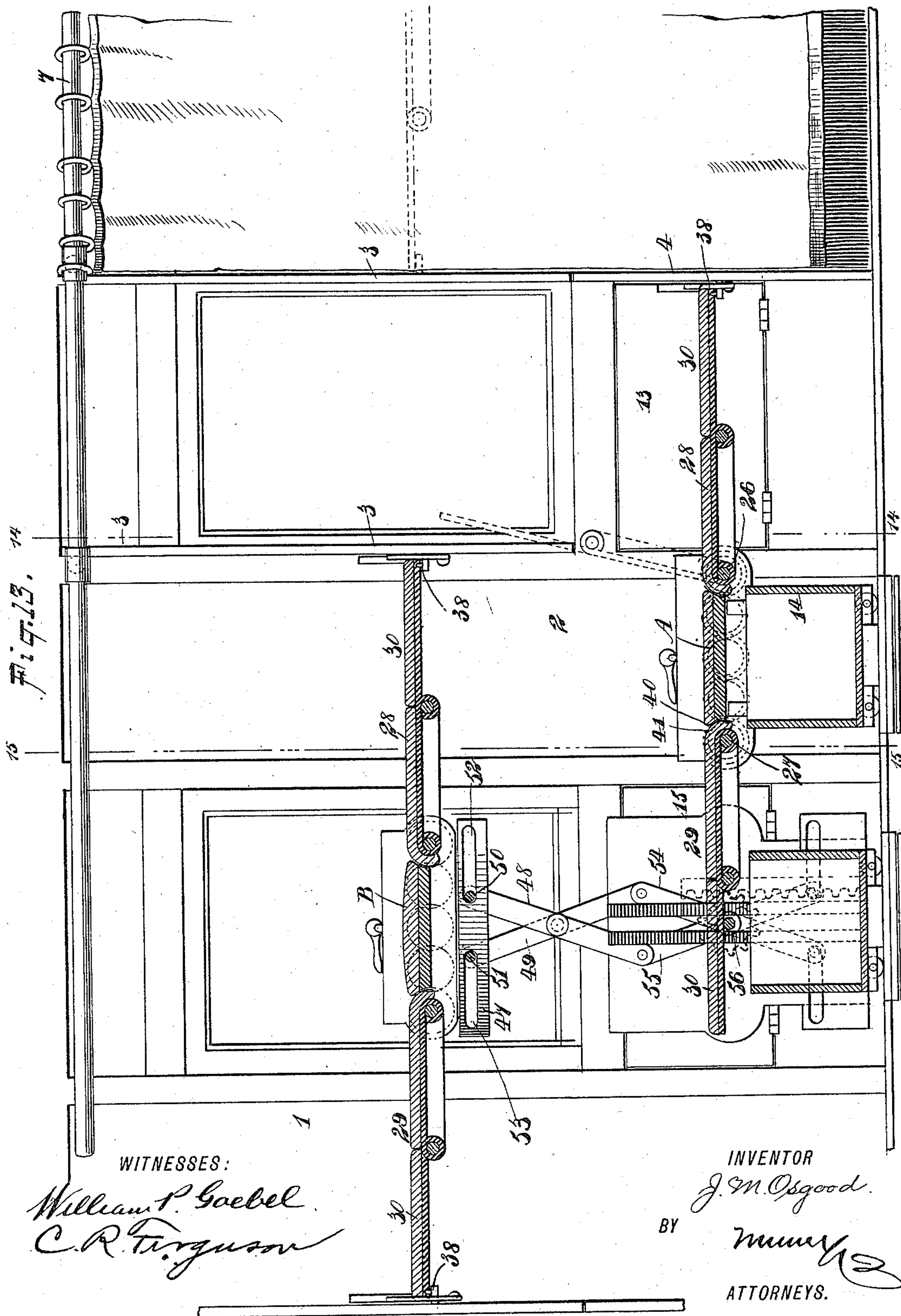
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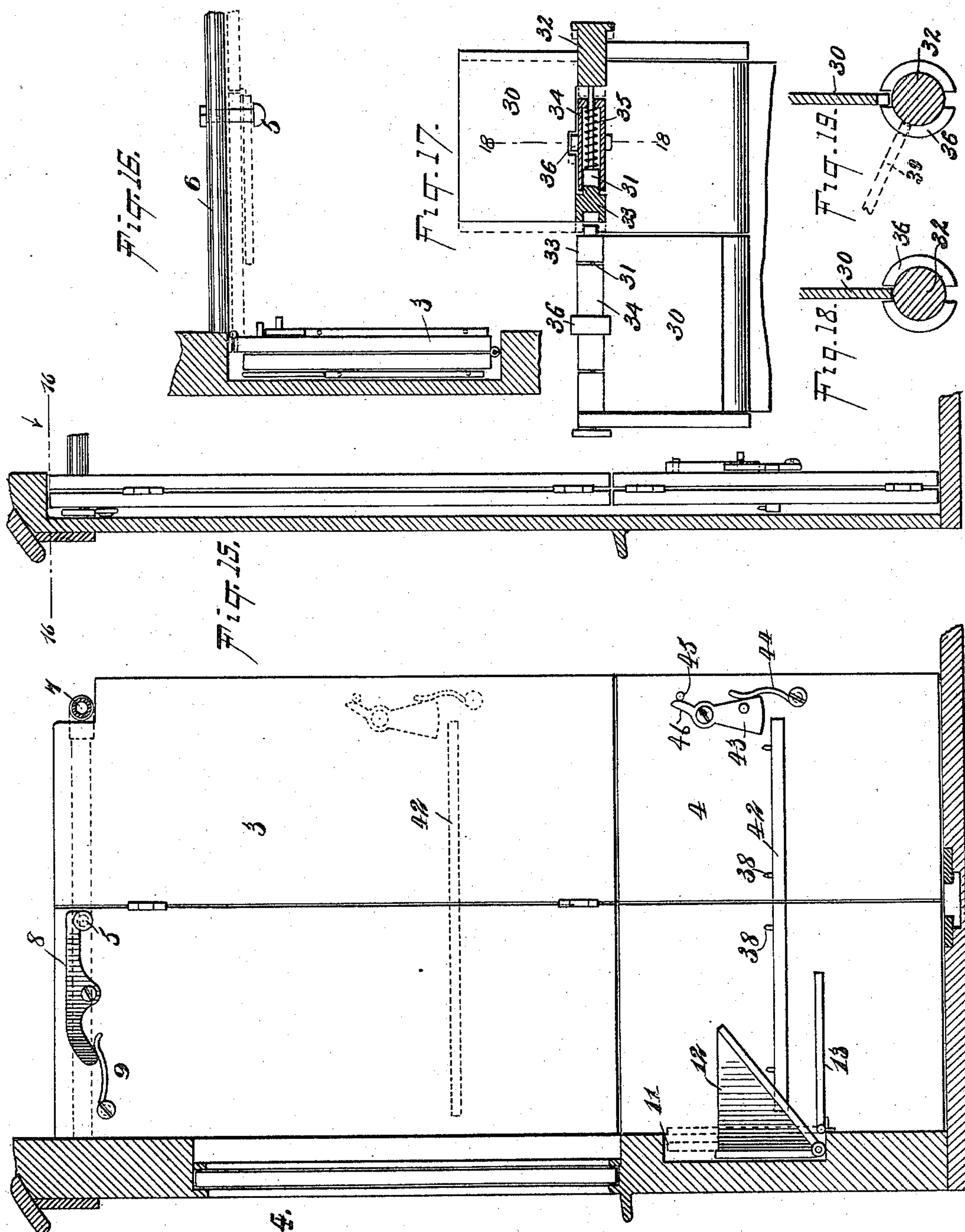
(No Model.)

5 Sheets—Sheet 5.

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No. 579,005.

Patented Mar. 16, 1897.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES MADISON OSGOOD, OF BOSTON, MASSACHUSETTS.

PARLOR AND SLEEPING CAR.

SPECIFICATION forming part of Letters Patent No. 579,005, dated March 16, 1897.

Application filed April 22, 1896. Serial No. 588,616. (No model.)

To all whom it may concern:

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

This invention relates to railway-cars; and the object is to provide such a car in which
10 the chairs or seats employed for day use may be quickly and readily converted into sleeping-berths and so arranged that the berths of a section will overlap each other to a certain extent, thus economizing space in the sec-
15 tions.

A further object is to provide separating-partitions for the several sections of a car, that may be compactly folded in the side framing of the car during day use and ex-
20 tended transversely in connection with the berths; also, to provide an intermediate partition which divides a section into two compartments for night use.

A further object is to so attach the seats or
25 chairs to the floor of the car that said seats or chairs may be all moved to an end or ends of the car, thus providing a reception-room throughout the greater length of the car.

I will describe a car embodying my inven-
30 tion, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indi-
35 cate corresponding parts in all the views.

Figure 1 is a partial elevation and partial longitudinal section of a car embodying my invention and showing the seats or chairs ar-
40 ranged for day use. Fig. 2 is a plan view thereof. Fig. 3 is a view similar to Fig. 1, but showing the seats or chairs arranged as berths for night use. Fig. 4 is a detail view showing a locking mechanism for movable parts of the seats. Fig. 5 is a section on the
45 line 5 5 of Fig. 4. Fig. 6 is a partial section and partial elevation of gearing employed for operating the movable parts of a seat. Fig. 7 is a plan view of a section of track along which the seats are designed to be moved.
50 Fig. 8 is a vertical section on the line 8 8 of Fig. 11 of one of the seats designed for use as an upper berth and showing it in its low-

ered position. Fig. 9 is a similar view of another seat designed to be converted into a lower berth and showing the same in position
55 as a seat. Fig. 10 is a similar view to Fig. 8, but showing the seat as elevated to form the upper berth. Fig. 11 is a vertical section of the seat shown in Fig. 8, but drawn on an enlarged scale. Fig. 12 is a rear elevation of
60 a seat shown in position for day use. Fig. 13 is a sectional view drawn on an enlarged scale, showing the seats in position for sleeping-berths. Fig. 14 is a section on the line
65 14 14 of Fig. 13. Fig. 15 is a section on the line 15 15 of Fig. 13. Fig. 16 is a section on the line 16 16 of Fig. 15. Fig. 17 is a partial section and partial elevation showing a locking mechanism employed. Fig. 18 is a sec-
70 tion on the line 18 18 of Fig. 17; and Fig. 19 is a similar view to Fig. 18, but showing the parts in a locking position.

The car comprises the side walls 1, and as here shown these side walls are provided with recesses 2 between the windows to re-
75 ceive partitions 3 4, designed to separate the several sections of a car and to support portions of the seats when extended to form berths. The partitions each consist of two
80 or more folding sections, which when folded together will be substantially the width of the recess 2 formed in the car-wall, so that when closed therein the exposed surface will form a finish to the said wall.

The partition portions 3 4 are here shown
85 as independent one of the other. I provide means for retaining the partitions 3 rigidly in place when extended transversely of the car. As here shown this means consists of
90 pins 5, adapted to pass through perforations in the partition and having a head at their ends. These pins 5 extend from transverse bars 6, secured at one end to the wall of the car and at the opposite end to a curtain-pole
95 7, extended longitudinally of the car. 8 is a latch pivoted to a section of the partition and having one end engaged by a spring 9, fastened to the partition-section, and the other end projected forward to engage on the rear side of the head portion of the pin 5, as indi-
100 cated in dotted lines in Fig. 16 and in full lines in Fig. 14. The head of the pin 5 on its outer side is rounded, and obviously when the partition is swung to its transverse po-

sition and the pin passes through the opening in the partition the head thereof will force the end of the lever 8 upward, and when the head shall have passed the said lever the spring 9 will rock the lever into engagement with the rear side of said head. Therefore it will be seen that an automatic locking device is provided for the partitions.

Below each window a recess 11 is formed in the wall of the car, and this recess is adapted to receive a support 12 for a wash-basin. This support 12 consists of a front board having its lower edge pivoted within the recess 11 and having flexible side pieces. When the device 12 is folded into the recess, the recess may be closed by a door 13, hinged at its lower edge to the wall of the car. This door 13, when turned to its horizontal position, serves as a seat in the section of a car, for a purpose to be hereinafter described, and for the purpose of this description I will term the portions 13 as "folding seats extended longitudinally of the car."

I will now describe the seats or chairs and their operation.

A designates what may be termed the "lower-berth seat," and B the "upper-berth seat." These seats are of the same general construction, excepting that one has an elevating mechanism attached to it, and therefore a description of the seat portion of one will answer for both. The seat A is supported on a boxing 14, and secured to the upper sides of this boxing 14, at each end thereof, are casings 15, and in each casing is journaled a series of intermeshing gear-wheels 16, 17, 18, 19, and 20. The intermediate gear-wheels 17, 18, and 19 are designed merely to convey motion of the same relative speed between the wheels 16 and 20, as these wheels 16 and 20 are designed to operate in unison the back portions and leg-rest portions of a seat when the same are moved to either of their required positions.

As a means for locking the chain of gearing to hold the parts rigidly in place I may employ a rack-bar 21, arranged to move vertically in the upper portion of the casing 15. This rack-bar 21 is provided with rack-teeth 22, designed to engage with the teeth of the gear-wheels to hold them rigidly, and as a means to move said rack-teeth out of engagement with the gear-teeth I employ a cam-lever 23, mounted on the upper side of the casing 15 and having link connections 24 with the central portion of the bar 21. These links 24 of course extend through an opening in the top wall of the casing 15. Springs 25, having one end seated in sockets formed in the upper side of the bar 21 and connecting at their upper ends with the top wall of the casing 15, serve to force the said bar downward when the cam-lever 23 is turned in the proper direction to allow said downward movement of the bar.

Opposite gear-wheels 16 are connected by a transverse shaft 26, and opposite gear-wheels

20 are connected by a transverse shaft 27. On the shaft 26 is mounted to swing a seat-section 28, and on the shaft 27 is mounted to swing a seat-section 29. These sections 28 and 29 are designed to form a berth when the said sections are extended in a horizontal plane with the seats A or B, but when the device is in the form of a seat for day use the section 28 may be turned upward to form a back for the seat and the section 29 turned downward to form a leg-rest and foot-rest, or of course the parts may be reversed, as it depends upon the direction in which a car is traveling as to which section will form the back to the seat and which section shall form the leg-rest. Preferably there are two sections 28 mounted side by side on the shaft 26 and adapted for independent movement one relatively to the other, and the section 29 is also made in two parts adapted to swing in the same manner.

On each of the sections 28 29 is mounted to swing a continuation-section 30. These continuation-sections have their inner edges pivotally connected to the outer edges of the sections 28 or 29. As indicated in Fig. 12, this pivotal connection consists of a rod 31, rigidly connected with ears 32 33 on the edge of the section 30 and adapted to move through a sleeve 34 on the adjacent edge of the section 28. The rod 31 has a reduced portion within the sleeve 34, and surrounding this reduced portion and bearing at one end against the rod 31 and at the other end against the perforated end wall of the sleeve 34 is a spring 35, adapted to move the extended section 30 transversely with relation to the section 28. The sleeve 34 is provided in its central portion with an annular flange 36, having a notch at one side, between the walls of which the edge of the extension-section 30 is adapted to engage to hold said section 30 in a plane with the section 28 when the parts are extended to form a berth. When the parts are to be folded together, however, by drawing upward on the rod 31 the section 30 will be moved transversely to disengage it from the notch in the flange 36, and then the section 30 may be lowered with relation to the section 28, as its edge is provided with a notch to embrace the said flange.

It will be seen that the rod 31 terminates a short distance within the portion 33, so that a socket is formed to engage the end of the rod 31 of the adjacent section which projects beyond this portion 33, and thus the several sections will be supported centrally and also be caused to move in unison.

The sections 28 and 29 are respectively provided with latches to engage with their respective gear-wheels 16 20. As here shown these latches consist of rods 37, having a body portion movable within a boxing on the end of the section. Each latch is provided with a finger-piece extended outward through a slot in the boxing, and the lower portion of the latch is adapted to engage in a notch 39,

formed on an annular shoulder on the inner side of the gear-wheel. These features are plainly shown in Figs. 4 and 5.

The several sections and also the seat portions are provided with suitable upholstery or cushions, which serve in the place of a mattress when a seat is employed as a berth, and to provide a substantially unbroken connection between the cushion on the seat A and the cushions on the sections 28 or 29 I form the edges of the said cushion with a transverse concavity 40, and the adjacent edges of the sections 28 or 29 are convexed, as shown at 41, to engage closely in these concaved portions.

In operation, when it is desired to form the seat into a berth, the locking device 21 is disengaged from the gear-wheels, and then by lowering the back portion, which may consist of the sections 28, the gear-wheels will be lowered, and this will cause the elevation of the sections 29, and when these sections are in a horizontal plane with the seat portion A the bar 21 is again engaged with the gear-wheels, so that the parts will be held rigidly in place. After this the extension-sections 30 are to be moved in a position in a plane with the sections to which they are attached, as plainly shown in Figs. 3 and 13. As the ends of the sections 30 move into engagement with the partition 4 they will engage and rest upon a bar 42, arranged on the partition, and in the movement to engage with said bar 42 the outer edge of one of the sections 30 will engage against the inner edge of a stop-latch 43, pivotally connected with the partition. The engagement of the section 30 with the latch 43 will rock it outward against the resistance of a spring 44, fastened at one end to the partition and bearing at the other end against the latch, and after the section shall have passed this latch the spring will move the latch over the section, thereby providing a stop to prevent an upward movement of the section. The bars 42 have pins 38 to engage in sockets formed in the back-sections.

To prevent the stop-latch from moving too far inward, I employ a stop, as here shown, consisting of a pin 45, extended from the partition and adapted to be engaged by a finger 46, formed on the end of the latch. It is obvious, however, that this pin might be otherwise placed to form a stop.

As before stated, the seat B and its connections are similar to the seat A and its connections; but as this seat B is to be elevated its frame 47 is detached from the boxing 14. As a means for elevating the seat B, I employ a lazy-tongs construction, here shown as consisting of crossed centrally-pivoted arms 48 49, having their upper ends respectively connected to transverse bars 50 51, the opposite ends of said bars being connected with similar links at the opposite end of the seat. These bars 50 51 are movable in slots 52 53, formed longitudinally in the end pieces of the frame 47. The lower ends of the links are

pivoted to the upper ends of crossed links 54 55, which are fulcrumed at their central portion on a shaft 56, extended transversely of the seat and having similar links 54 55 pivoted on its opposite end. The shaft 56 has its ends extended through vertical slots 57, formed in the end walls of the boxing 14, and these outer ends are provided with pinions 58, engaging with rack-bars 59, secured to said end walls of the boxing 14. The end of the shaft 56 toward the center of the car or toward the aisle is made angular to receive a key or crank by means of which the seat B may be elevated and lowered; that is, it will be seen that by rotating the shaft 56 in one direction the pinions 58 will move upward on the racks 59 and cause the ends of the links of the lazy-tongs to approach each other and thus elevate the seat, and of course an opposite rotation of the shaft will cause the separation of the ends of the links and lower the seat. As there are no supporting-partitions to engage with and support the lower berth at its end underneath the upper berth, the said end may rest for support on the shaft 56.

The several seats are designed to be moved longitudinally of the car for the purpose of placing them at the ends of the car when it is desired to provide a large open space for a reception-room in the car. The several seats or their supports are provided with rollers 60, which bear upon the floor of the car, and the lower portion or boxing 14 of each seat is provided with a guide-block 61, designed to move in a track-channel 62 in the floor of the car. The guide-block 61 has laterally-extended flanges 63, adapted to engage underneath metal strips or plates 64, the adjacent edges of which project over the channel 62.

Pivotally connected to the under side of the guide-block 61 and extended longitudinally thereof is a lever 65, which at one end is engaged by the free end of a spring 66, attached to the guide-block. This spring 66 is designed to normally force the opposite end of the lever 65 laterally with relation to the guide-block. This lever 65 has at its free end an upwardly-extended flange 67, projected between the opposite plates or strips 64 and engaging against a shoulder 68, formed in one of the said plates 64. This shoulder 68 is formed by incutting the edge of the metal strip 64, and from the base of the shoulder 68 to the inner edge of the strip 64 the wall 69 is arranged at an incline, so that the seat may be moved in one direction, as said inclined wall 69 will force the end of the lever 65 inward or into a recess formed in the guide-block 61. When it is desired to move the seat in the opposite direction, however, this free end of the lever 65 may be moved inward to disengage it from the shoulder 68 by a person placing his foot against a finger 70^a, projected from the lever and extended above the plane of the floor.

Cars have heretofore been constructed in which one seat of a pair is adapted to be moved

toward or from the other seat of the pair merely for convenience in arranging them in the form of berths, but by my construction, in which all the seats are movable, a new result is obtained, that is, a car may be thus readily changed to form a reception-room extending the greater length of the car.

When the seat B is in its lowermost position, the upper end of the casing 15 should be provided with an arm-rest. In Fig. 11 an arm-rest 70 is shown, the upper portion of which is designed to pass over the back of the casing 15 and the downwardly-extended flange portion 71 of which is provided with grooves to engage over flanges on the inner side of the casing. This arm-rest of course must be removed before the seat is elevated to form a berth.

Within each section of a car I provide a receptacle for bedclothing. Each receptacle consists of a box 72, adapted to fold up into a recess formed in the ceiling of the car. This box is hinged at one end to a wall of the recess, and at its opposite edge it has a fastening device to engage with the adjacent wall of said recess.

It will be seen by the construction described that a car may be quickly changed from a day-coach to a sleeping-car and that the parts of a seat may be arranged at any desired angle with relation to each other to form couches or reclining-chairs for day travel. It may be here stated, however, that I do not confine my invention to cars, as the seats might be applied to boats or other vehicles.

While dressing or undressing, the sections 28 and 30 may be moved upward to the position indicated in dotted lines in Fig. 13, thus providing a clear space within the section, and then the part 13 may be lowered to form a seat for the convenience of the traveler. Of course the usual curtains will be mounted upon the curtain-pole 7.

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

1. In a parlor and sleeping car, in combination with curtains running parallel with the aisle, partitions folding into the framing of the car and when in use extending transversely, separating said car into sections, an intermediate partition dividing each state-room into two compartments, thereby furnishing a separate dressing-room for each berth contained in said compartments, substantially as specified.

2. In a parlor and sleeping car with partitions folding into the framing of the car and when in use extending transversely of the car, a bar attached to said partitions, provided with pins which interlock with ends of the berths, holding them to the partitions in a firm manner for night use and automatic locking devices on the partitions for engaging over the berths, substantially as specified.

3. A railway-car, partitions therein and adapted to be extended transversely of the car,

to divide it into sections for night use, each section containing two chairs or seats capable of being converted into berths for night use a portion of one chair interlapping about half-way over the other chair, means for interlocking portions of the chairs with the partitions, whereby the chair portion may be independently detached from the partitions and swung up or down in a vertical position, thus providing a free space from the floor to the top of the car, substantially as specified.

4. A car, having a slot-track extended longitudinally of the car, a series of seats, each of said seats having a guide-block engaging in said slot-track, and a spring-actuated lever on the guide-block, for locking the seat in position in said guide-block, substantially as specified.

5. A car having a longitudinal channel formed in its floor, strips secured to said floor and overlapping said channel, one of said strips having shoulders formed in it, a series of seats, a guide-block on each seat having flanged portions to engage under the strips, and a locking-lever on the block to engage with one of said shoulders, substantially as specified.

6. A car, having recesses formed in its side wall, a receptacle adapted to fold therein, and a hinged cover for said recess, the said cover also forming a seat when arranged in a horizontal position, substantially as specified.

7. A parlor and sleeping car having a series of transversely-arranged seats, a series of seats at right angles thereto adapted to fold up against the side wall of the car and a receptacle having a front board and flexible sides pivoted rearward of each of said right-angle seats, substantially as set forth.

8. A parlor and sleeping car, having recesses formed in its side wall, partitions adapted to fold into said recesses, rods extended transversely of the car, pins projected from said rods and adapted to pass through holes in the partitions, and automatic latches carried by the partitions to engage with said pins and rigidly hold the partitions in their transverse positions, substantially as specified.

9. A parlor and sleeping car, having recesses in its side wall, partitions adapted to fold into said recesses and also to be moved transversely of the car, automatic means for locking said partitions in their transverse positions, car-seats adapted to be converted into berths, supports on the partitions with which the ends of the berth are to engage, and automatic latches for engaging over the ends of the berths, to prevent an accidental upward movement thereof, substantially as specified.

10. The combination with a seat, of a back-section having swinging connection therewith, the said back consisting of two sections, an extension-section pivotally connected to said back-section, a leg-rest having swinging connection with the seat, gearing for adjusting said back and leg-rest in unison, the said back and legs being each movable independ-

ently of the gearing, and means for locking the several sections in position, substantially as specified.

11. The combination with a car-seat, of leg-rests pivoted to one edge thereof, a back pivoted to the opposite edge thereof, a chain of gearing for operating said rests and back, the said rests and back also being movable independently of the gearing and a rack-bar for locking said gearing, substantially as specified.

12. The combination with a car-seat, of leg-rests pivoted to one edge thereof, a back pivoted to the opposite edge thereof, a chain of gearing for operating said rests and back, a rack-bar for locking said gearing, and a cam-lever for moving said rack-bar out of engagement with the gearing, substantially as specified.

13. The combination with a car-seat, of leg-rests pivotally connected to one side thereof, a back pivotally connected to the opposite side thereof, and consisting of sections adapted for independent movement with relation to each other, means for locking said back-sections to move in unison, means for locking the leg-rest sections to move in unison, a chain of gearing for operating the back-sections relatively to the seat and the leg-rest sections relatively to the seat, a rack for locking said gearing, a cam-lever for holding the rack out of engagement with the gear, locking mechanism between the back-sections and said gearing, and locking mechanism between the leg-rest sections and said gearing, substantially as specified.

14. A car-seat adapted to be converted into a berth, and comprising a base portion, a seat portion movable vertically with relation to the base portion, lazy-tongs mechanism for causing said movements, a pinion on a shaft of the lazy-tongs, a fixed rack with which the pinion engages, a leg-rest pivotally connected to one edge of the seat, and a back-rest pivotally connected to the opposite end of said seat, whereby said rests may be extended

horizontally to form a berth, or moved into position to form a seat, substantially as specified.

15. A car-seat, comprising a base portion, a seat portion movable relatively thereto in a vertical direction, lazy-tongs links for causing said vertical movements, a pinion mounted on a shaft of the lazy-tongs, and a rack secured to the seat-boxing engaged by said pinion, substantially as specified.

16. A car-seat, comprising a base portion, a seat movable vertically with relation thereto, a lazy-tongs mechanism for causing said vertical movements, a pinion carried by the lazy-tongs, a fixed rack engaged by the pinion, extensions pivotally connected with the opposite edges of the seat, and gearing for operating said extensions, substantially as specified.

17. A car-seat, comprising a base portion having casings at its upper end, gearing mounted in said casings, a rack-bar for engaging the gearing, a cam-lever for moving the rack-bar out of engagement with the gearing, a seat mounted on the support, extension-pieces pivoted to opposite edges of said seat, and detachable connections between the extensions and gearing, whereby the several sections may be moved in unison and whereby the sections may be independently moved, substantially as specified.

18. A car-seat, having transversely-concaved edges extending across the upholstering, and extension-pieces pivoted to the opposite edges and having convex portions extending across the upholstering to engage in said concavities, whereby a substantially unbroken surface may be provided between the extensions and seat when said extensions are extended horizontally, substantially as specified.

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Witnesses:

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