No. 802,222. PATENTED OCT. 17, 1905.

J. B. LAWRENCE.

CHAIR.

APPLICATION FILED DEC. 4, 1903.

3 SHEETS—SHEET 1.

Fig. 1

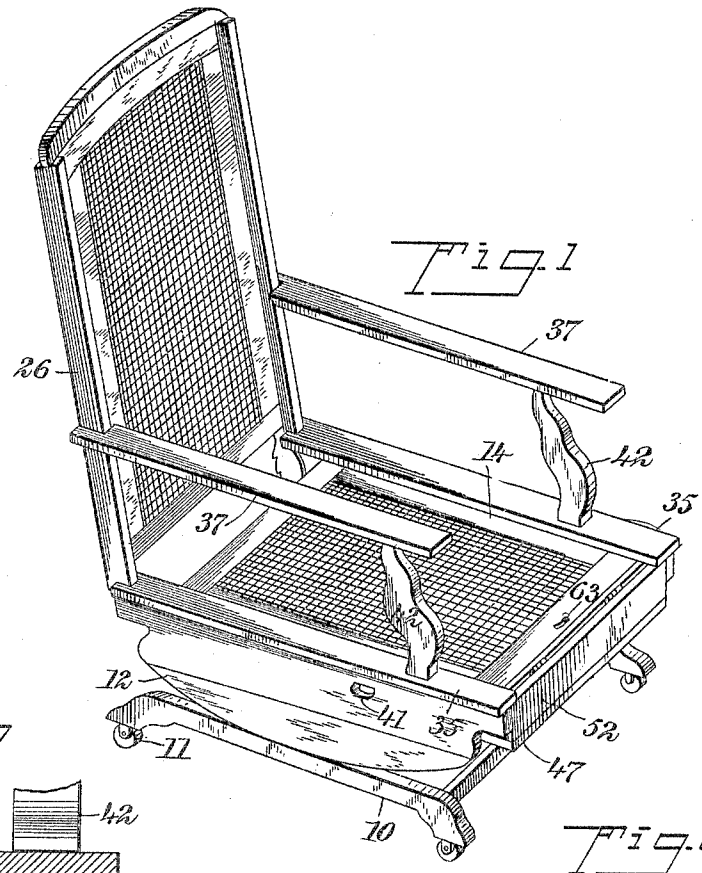


Fig. 7

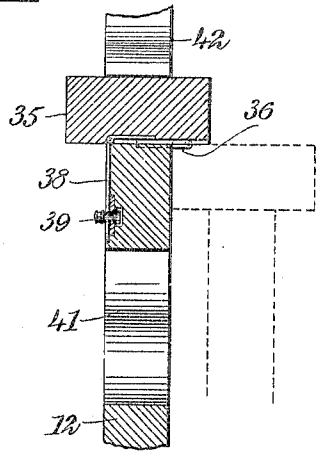


Fig. 8

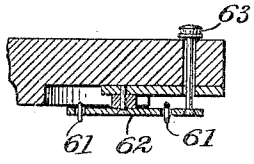


Fig. 9

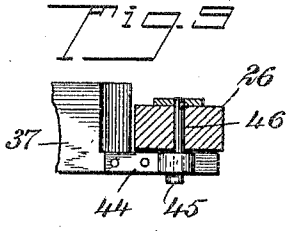
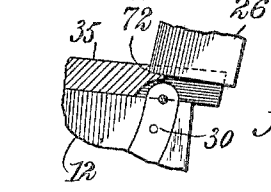


Fig. 10



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3 SHEETS—SHEET 2.

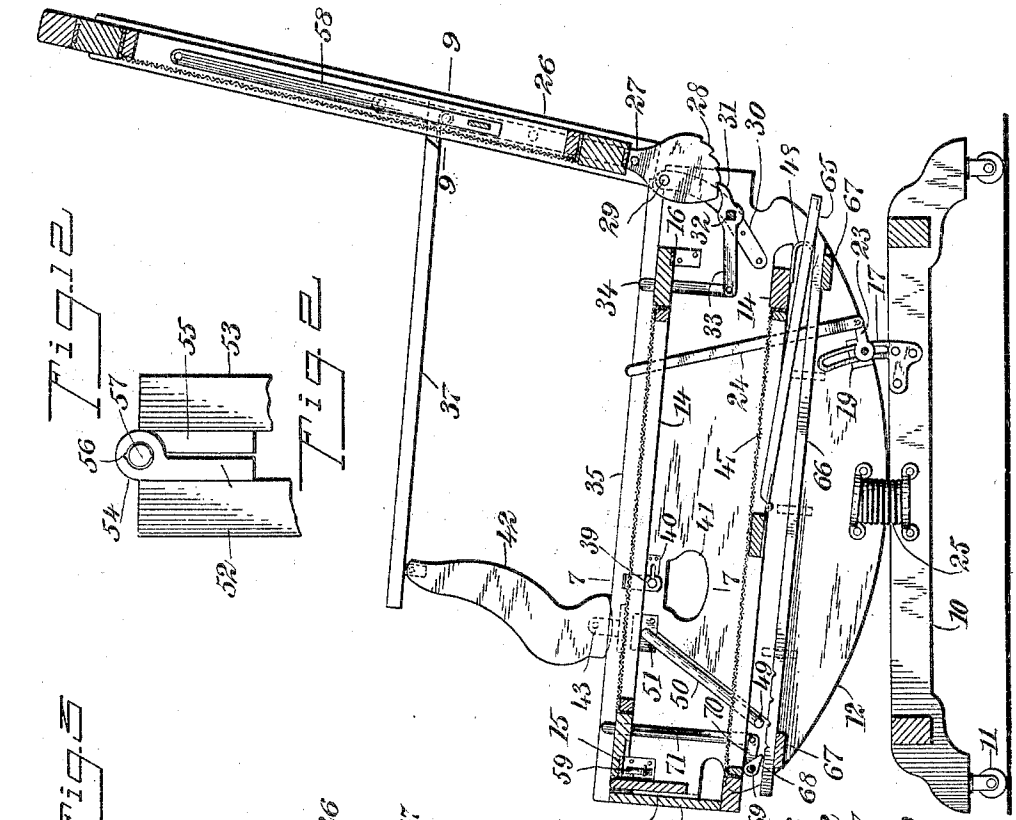

Fig. 12

Fig. 2

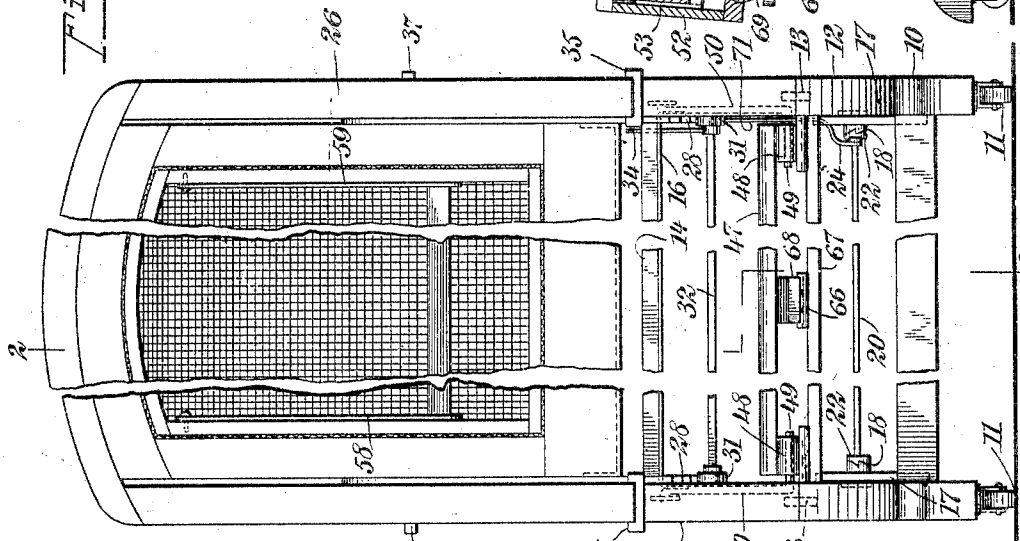

Fig. 3

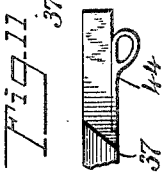

Fig. 11

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No. 802,222. PATENTED OCT. 17, 1905.

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3 SHEETS—SHEET 3.

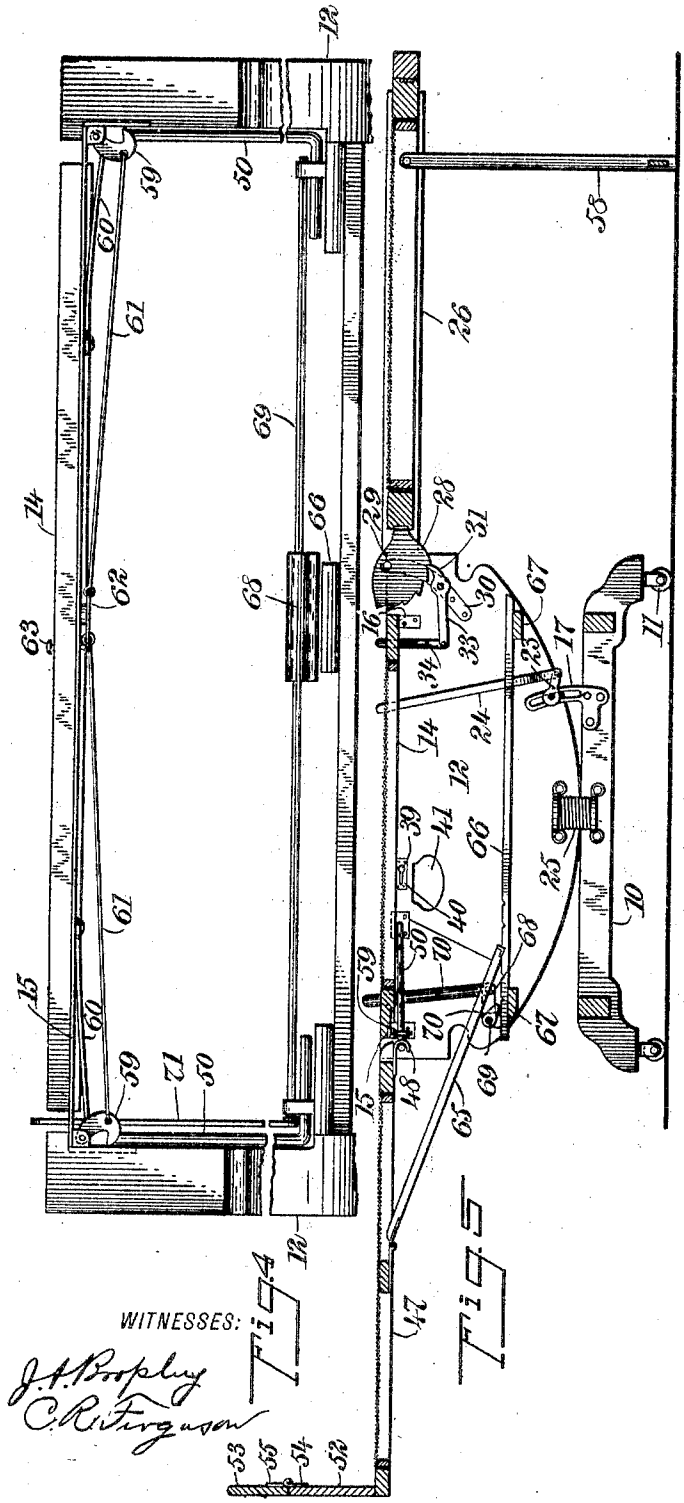

Fig. 4

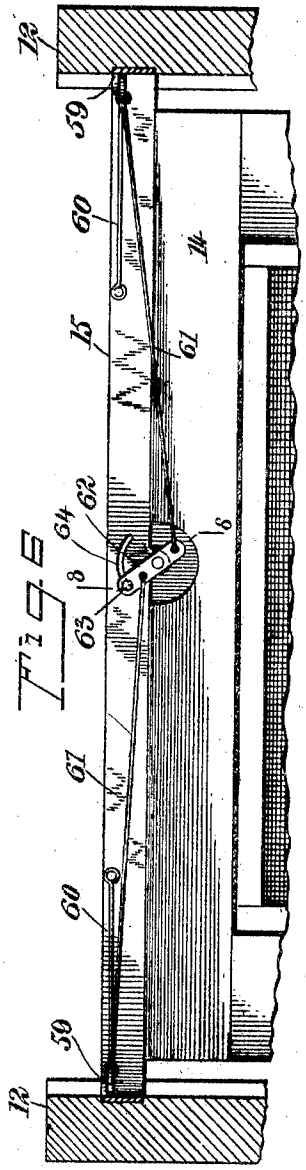

Fig. 5

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UNITED STATES PATENT OFFICE.

JOSEPH B. LAWRENCE, OF NEW YORK, N. Y.

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No. 802,222. Specification of Letters Patent. Patented Oct. 17, 1905.

Application filed December 4, 1903. Serial No. 183,737.

To all whom it may concern:

Be it known that I, JOSEPH B. LAWRENCE, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Chair, of which the following is a full, clear, and exact description.

This invention relates to improvements in chairs of that class adapted to be converted into a bed or couch and to be used either as a rocker or a fixed chair, the object being to provide a chair of this character that may be easily and quickly adjusted as to its various positions and rigidly held as adjusted.

Other objects of the invention will appear in the general description.

I will describe a chair embodying my invention 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 indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a chair embodying my invention. Fig. 2 is a sectional view thereof on the line 2 2 of Fig. 3. Fig. 3 is a rear elevation. Fig. 4 is a front view of the seat-frame. Fig. 5 is a sectional view showing the parts extended to form a bed. Fig. 6 is a bottom view of the front portion of the seat. Fig. 7 is a section on the line 7 7 of Fig. 2. Fig. 8 is a section on the line 8 8 of Fig. 6. Fig. 9 is a section on the line 9 9 of Fig. 2. Fig. 10 is a detail view illustrating the connection between the back frame and arm-carrying rails. Fig. 11 is a detail view showing means for detachably connecting the arms to the back-frame, and Fig. 12 shows a hinge connection between the footboard members.

Referring to the drawings, 10 designates the base-frame of the chair, supported on casters 11. Engaging on the upper sides of the side rails of the frame 10 are rocker-boards 12, which are preferably each made in two sections removably connected together by means of dowels 13. The object in making the rocker-boards in two sections is for convenience in packing the chair for transportation or the like. A seat-frame 14 is connected at its front to a metal bar 15 and at its rear end to a metal bar 16. These metal bars have downwardly-turned ends which are secured in depressions formed in the inner sides of the rocker-boards, and it will be noted that the bars also engage in recesses formed in the under sides of the end members of the seat-frame. With this arrangement the metal bars are practically hidden from view, and it may be here stated that one object of the invention is to hide the metal parts as much as possible.

Secured to the side members of the base-frame 10 and extended upward therefrom are arc-shaped plates 17, provided with curved slots in which clutch members 18 are designed to slide. These clutch members 18 have plates 19 designed to engage frictionally against the outer sides of the plates 17, and these clutch members 18 are also mounted on a rod 20, which carries clutch members 22 for engaging with the clutch members 18. It will be noted in Fig. 3 that the clutch members have ratchet-shaped engaging teeth.

Extended from the rod 20, near one of the plates 17, is an arm 23, from which a draw rod or lever 24 extends upward between the seat-frame at one side and the adjacent rocker-board. The clutch members 22 are rigidly connected to the shaft 20; but said shaft is arranged to rotate in the clutch members 18. By drawing upward on the lever 24 the clutch members 22 will cause the members 18 to bind tightly against the plates 17, thus holding the rockers as adjusted relatively to the frame 10—that is, to secure the seat 14 at an angle with relation to the base-frame. When it is desired to use the chair as a rocker, the lever 24 is to be manipulated to relieve the binding strain of the clutch members 18 against the plates 17, and then the upper structure may rock on the base-frame, the said clutch members 18 sliding freely in the slots of the plates 17.

The rocker-boards 12 are held in connection with the side members of the base-frame by means of spiral springs 25. The back-frame 26 has swinging connection with the rear ends of the rocker-boards 12. As here shown, metal straps 27 are secured in channels formed in the side members of the back-frame, and each strap 27 at its lower end has an arc-shaped rack 28, and the portions extended below the back-frame swing on pivots 29, attached to metal plates 30, secured to the inner sides of the rocker-boards and preferably seated in channels. The rack-teeth 28 are engaged by

pawls 31, attached to a rod 32, which at its end has bearings in the plates 30. One of the pawls 31 has a forwardly-extended arm 33, from which a draw-bar 34 extends upward at one side of the seat. By drawing upward on this bar 34 it is obvious that the pawls 31 may be released from the rack-teeth, permitting the back to be swung rearward or forward, as desired.

Having hinge connection with the upper edges of the rocker-boards are base-rails 35, the hinge connections being clearly indicated at 36 in Fig. 7. These base-rails 35 support arms 37. The said rails are so hinged to the rocker-boards as to swing outward with relation thereto, as indicated by the dotted lines in Fig. 7, so as to widen the said portion when the chair is used as a bed or couch. The rails, however, are held in normal position by means of metal straps 38, having swinging connection with said rails and provided with outwardly-opening slots for receiving pins 39, which slide in slots formed in plates 40, secured to the inner sides of the rocker-boards. The said rocker-boards are provided with openings 41, so that a person may pass his hand through to move the pins 39 out of engagement with the straps 38 or into engagement therewith. The arms 37 have pivotal connection at their front ends with standards 42, which are mounted to swing on lugs 43, attached to the rails 35. Secured to the under side of the arms 37 at the rear ends are eye-bolts 44, the eyes in which are substantially oval in form and designed so as to pass over the correspondingly-shaped heads 45 of bolts 46, secured to the side rails of the back-frame. When the back is in one position, the eyes may be readily slipped off or on the bolts; but when the device is used as a chair—that is, with the back at various inclines—the heads of the bolts will prevent the arms from becoming accidentally detached from the back.

I will now describe the leg-rest and footboard employed in connection with the chair.

The leg-rest comprises a frame 47, having a covering of any suitable material, and this leg-rest is designed when not in use to be arranged underneath the seat. At its inner end the leg-rest frame is provided with hooks 48, designed to engage with horizontally-extended members 49 of supporting-rods 50, having swinging connection with plates 51, attached to the inner sides of the rocker-boards.

On the outer end of the leg-rest frame is secured at right angles thereto a footboard 52, on which is a swinging section 53. The section 53 is connected to the board 52 by means of hinges consisting of eye-sections 54 and pintle-sections 55. The walls of the eyes in the sections 54 are provided with notches 56 to receive lugs 57 on the pintles, so as to hold the swinging section 53 yieldingly in elevated position. It is to be understood that the eye members of the hinges will have sufficient spring to permit the lugs to pass into the notches and to be moved out of the same when sufficient pressure is brought to bear.

When the leg-rest is underneath the seat, the footboard 52 forms a closure for the front portion of the chair, as clearly indicated in the drawings. Of course at this time the section 53 will be turned down, as indicated in Fig. 2. When the leg-rest is to be used as such by a person sitting in the chair, it is to be drawn outward, so that the hooks 48 will engage with the portions 49 of the supporting-rods 50, and the outer end may rest upon the floor.

When it is desired to form a bed of the chair, the leg-rest is to be drawn out and swung upward, so as to be on a plane with the seat and back, the said back being turned down and supported by legs 58, having swinging connection with the side rails of the back. As the parts 50 are moved upward they will engage with supporting-hooks 59, which are curved on their under sides, so that the said rods may easily force the hooks inward against the resistance of spring-rods 60, which are connected at one end to said hooks and at the other end to the seat-frame. From the hooks 59 rods 61 extend to pivotal connection with a plate 62, the connection being on opposite sides of the pivot-point of said plate. The plate 62 is pivoted to the front cross-bar 15, and a pin 63 extends upward from one end of said plate through an arc slot 64 to the upper side of the frame, so that a person may manipulate the plate 62 to release the hooks from the supporting-rods 50.

To hold the leg-rest rigidly in its horizontal position or at any desired angle with relation to the seat, I employ a brace-bar 65, which has hinged connection with the center cross-bar of the foot leg-frame and is adapted to engage at its free end in any one of a series of notches formed in a rack-bar 66, supported centrally between the rocker-boards on cross-rails 67, attached to the opposite rocker-boards. As a means for raising the end of the brace-bar 65 out of engagement with the rack-bar, I employ a cam 68, mounted on a shaft 69, and from an arm 70 on this shaft 69 a lever 71 extends upward above the top of the seat at one side. By drawing upward on this lever 71 the cam 69, it will be seen, will raise the brace-bar out of engagement with the rack-bar. As before stated, when the device is to be used as a bed or couch the arms 37 are to be released from the bolts 46, permitting the arms to be swung downward against the outer sides of the rocker-boards, so that said rails 35, before mentioned, will widen or form lateral extensions of the bed at the seat portion. As a further means to prevent the rails 35 carrying the arms from swinging outward when the chair-back is in elevated position, I provide the lower ends of the side rails of the back with portions for engaging

in notches 72, formed in the tops of the rails 35 at the rear end, as clearly indicated in Fig. 10.

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

1. In a chair, a leg-rest, a footboard on the leg-rest, and a section having hinge connection with the footboard, each hinge comprising a spring-yielding eye member having an interior notch, and a pintle member provided with a lug for engaging in said notch.

2. A chair comprising a base-frame, rocker-boards mounted thereon, a back having swinging connection with the rocker-boards, base-rails having hinge connection with the upper edges of the rocker-boards, standards having swinging connection with said base-rails, and arms having swinging connection with the upper ends of said standards, and detachable pivotal connection with the back-frame.

3. A chair comprising a base-frame, rocker-boards mounted thereon, base-rails having hinge connection with the upper edges of said rocker-boards, means for locking the base-rails in normal position, standards having swinging connection with said base-rails, arms having pivotal connection with the upper ends of said standards, eye-plates secured to the rear ends of the arms, the eyes in said eye-plates being elongated, a back having swinging connection with the rocker-boards, and bolts on the side members of said back having heads corresponding substantially in shape to the eyes in the eye-plates.

4. A chair comprising a base-frame, rocker-boards mounted thereon, a seat supported by the rocker-boards, a leg-rest adapted to pass under the seat, supporting-rods having swinging connection with the rocker-boards at the inner sides, the said rods having inwardly-turned lower ends, hooks on the inner ends of the leg-rest for engaging with said inwardly-turned ends, swinging hooks for engaging with said supporting-rods when in elevated position, and means for simultaneously disengaging the hooks from said rods.

5. A chair comprising a base-frame, rocker-boards mounted thereon, a seat-frame supported by the rocker-boards, a leg-rest adapted to pass underneath the seat, rods having swinging connection with the inner sides of the rocker-boards, the lower ends of said rods being turned inward, hooks on the leg-rest for engaging with said inwardly-turned ends, hook-shaped keepers for engaging with the rods when in elevated position, a plate attached to the under side of the seat-frame at the front; rods extended from the opposite side of the pivotal point of said plate to said last-named hooks, and a pin extended upward from said plate, the front rail of the seat-frame being provided with an arc slot through which said pin passes.

6. A chair comprising a base-frame, rocker-boards mounted thereon, a seat supported by the rocker-boards, a leg-rest frame, a brace having swinging connection with said frame, a rack-bar supported by the rocker-boards for engaging with said brace, a rock-shaft, a cam carried by said rock-shaft for disengaging the brace from the rack-bar, an arm extended from the rock-shaft, and a draw-bar extended upward from said arm to a point above the seat.

7. A chair comprising a base-frame, rocker-boards mounted thereon and having openings, base-rails having hinge connection with the upper edges of the rocker-boards, notched plates having swinging connection with said base-rails, slotted plates secured to the inner sides of the rocker-boards, pins mounted to slide in said slots and to engage in the notches of the swinging plates, the said pins being adjacent to the openings formed in the rocker-boards, a back-frame having swinging connection with the rocker-boards, standards having swinging connection with said base-rails, and arms having swinging connection with said standards and with the back-frame.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH B. LAWRENCE.

Witnesses:

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C. R. FERGUSON.