May 3, 1932. L. A. CARTER 1,856,691

BARBER CHAIR

Filed Feb. 15, 1929 4 Sheets-Sheet 1

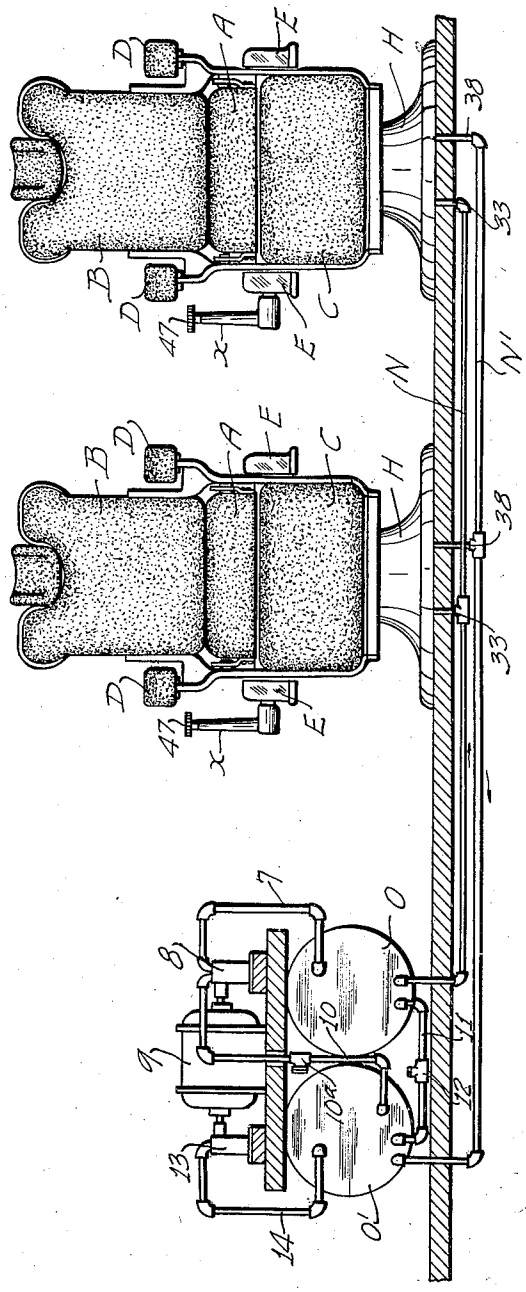


Fig. 1.

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BARBER CHAIR

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Fig. 2.

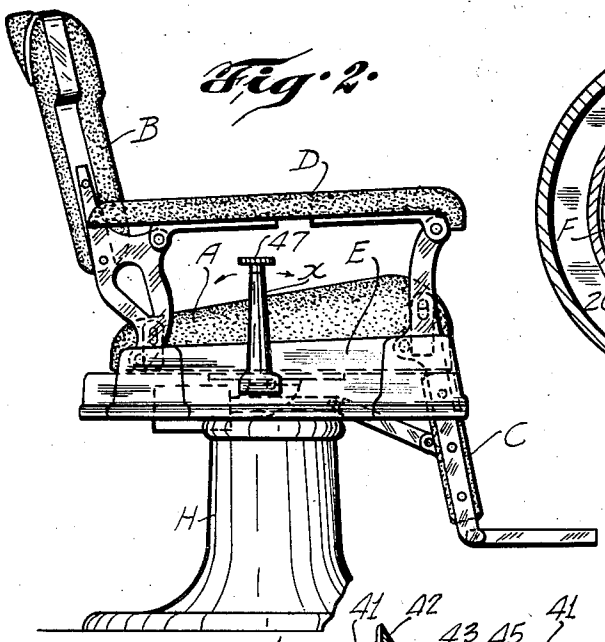



Fig. 4.

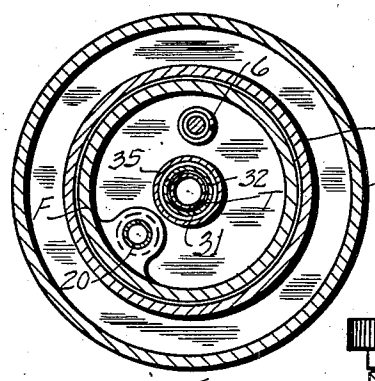



Fig. 6.

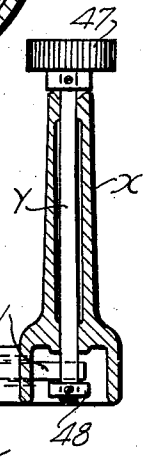



Fig. 3.

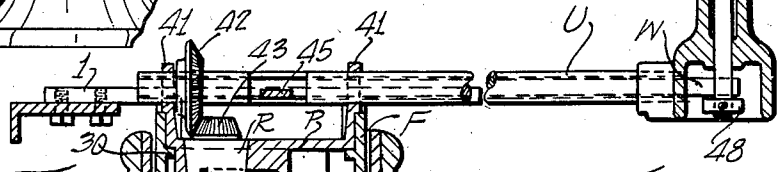
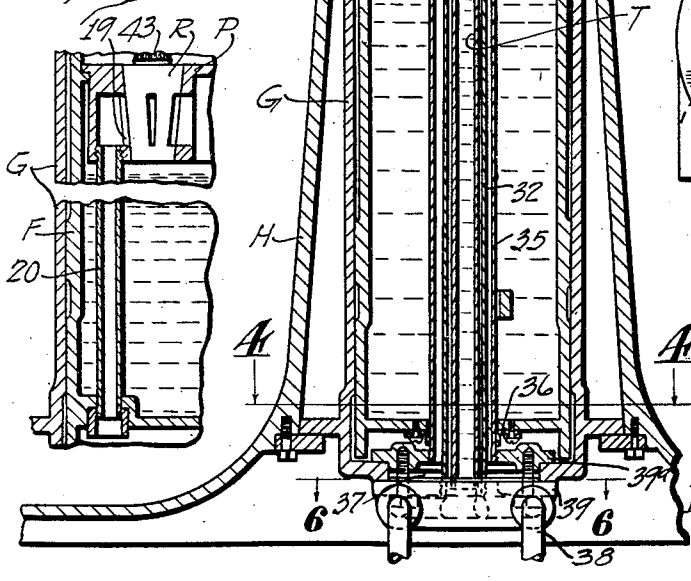
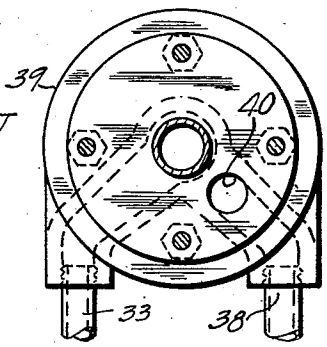



Fig. 5.

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BARBER CHAIR

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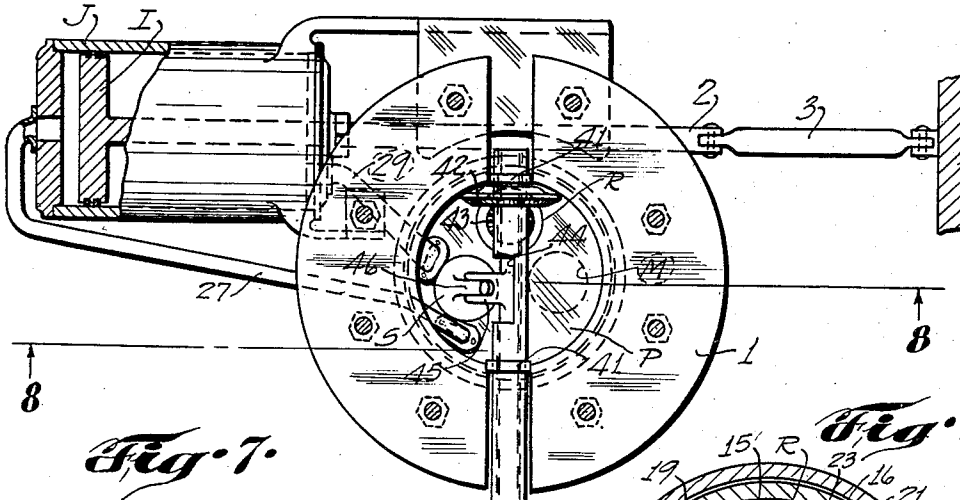


Fig. 7.

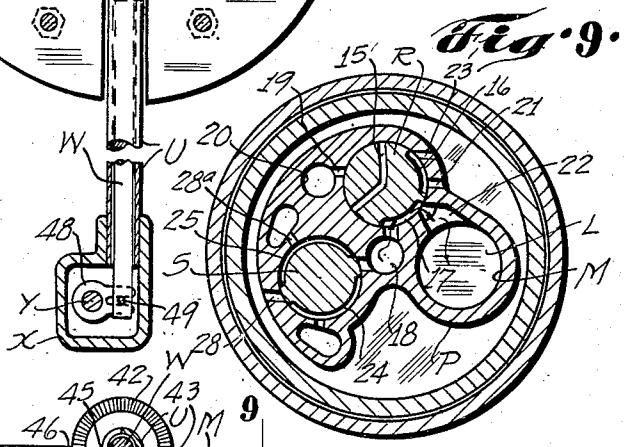


Fig. 9.

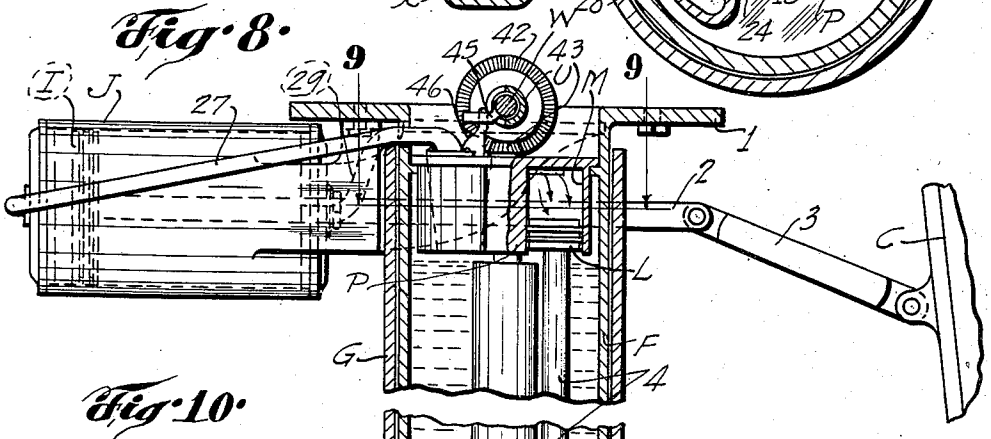


Fig. 8.

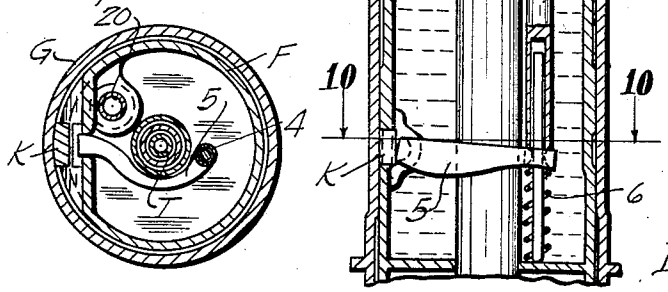


Fig. 10.

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BARBER CHAIR

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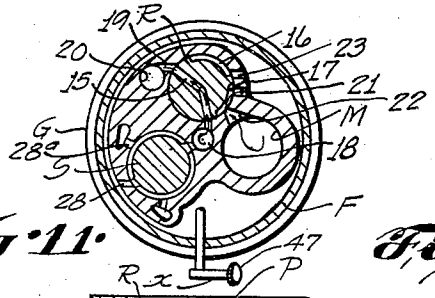



Fig. 11.

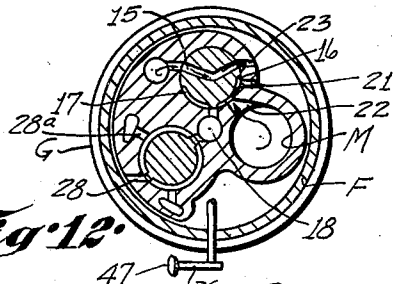
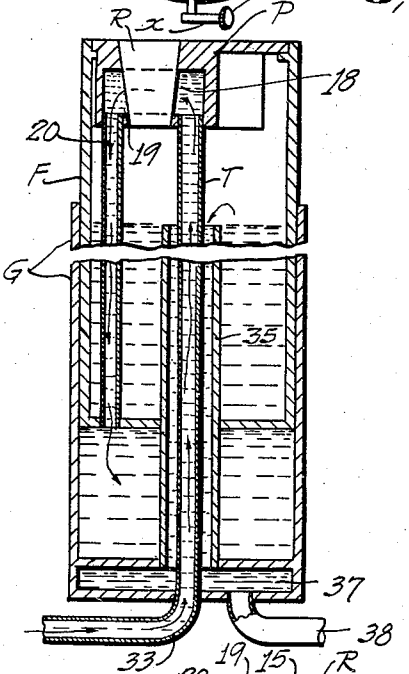



Fig. 12.



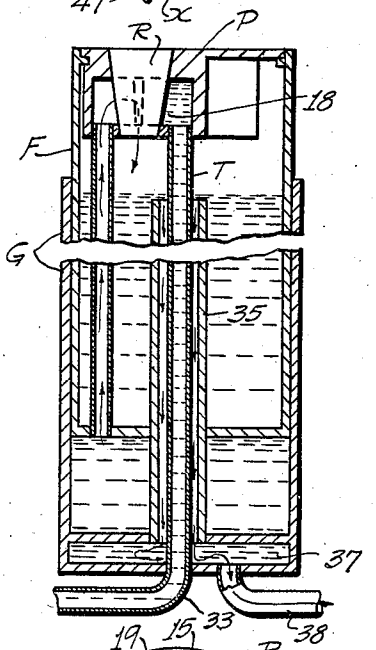
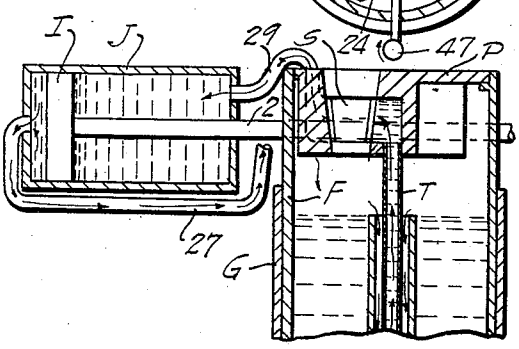





Fig. 13.



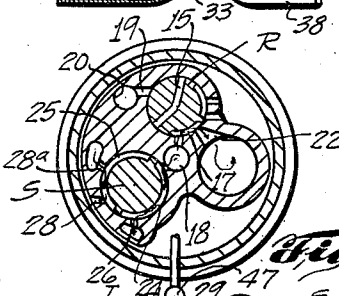
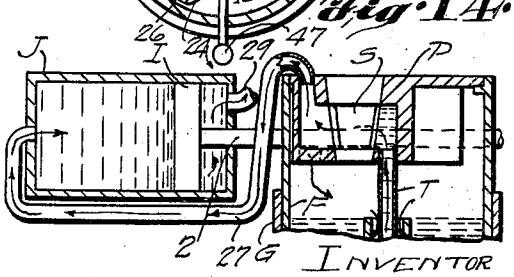




Fig. 14.

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# UNITED STATES PATENT OFFICE

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## BARBER CHAIR

Application filed February 15, 1929. Serial No. 340,157.

This invention relates to adjustable chairs of the kind that are used in barber shops, beauty parlors and similar establishments, and particularly, chairs of the type in which an hydraulic medium is used to raise or lower the seat of the chair.

One object of my invention is to provide a chair system for barber shops, beauty parlors and similar establishments, that comprises a plurality of chairs of the type in which the seat can be raised and lowered and the back can be adjusted relatively to the seat, a pressure supply line common to all of the chairs of the system filled with an hydraulic operating medium under pressure, and a valve mechanism associated with each chair for enabling the operator in charge of the chair to cause the hydraulic operating medium in the supply line to exert pressure directly on devices which effect the movement of the adjustable elements of the chair.

Another object is to provide a chair system of the general kind mentioned, which is of such construction that the chairs can be operated or adjusted without liability of producing an objectionable noise in the room in which they are located, and without liability of the hydraulic operating medium escaping from the portions of the chair in which said operating medium is confined or through which it circulates.

Another object is to provide a barber's chair or the like in which an hydraulic medium under pressure is used to raise and lower the seat, to swing the back into and out of its "reclined" position, and to govern a locking device that normally holds the seat of the chair against rotary movement.

Another object is to provide a barber's chair or the like of the hydraulic type, that is equipped with a reliable valve mechanism of simple design for governing the circulation of the hydraulic operating medium, arranged inside of the stem of the chair in such a position that it does not interfere with or restrict the downward movement of the stem into the socket of the chair, thereby making it possible to proportion or design the stem and socket so that the seat is capable of a relatively great range of vertical movement, even though the socket is made short enough to permit the seat to assume a relatively low position.

Another object is to provide a barber's chair or the like of the hydraulic type, that is equipped with a valve mechanism, and an operating means for said valve mechanism which is of novel design and such construction that the operator in charge of the chair merely has to move a governing member in opposite directions to raise and lower the seat, and merely has to turn a button or finger piece on said governing member in opposite directions to cause the hydraulic medium to move the back of the chair into and out of its reclining position, or hold said back in an intermediate position, the said movements of the governing member also being used to control a locking device that holds the seat of the chair against rotary movement.

And still another object of my invention is to provide a barber's chair or the like that is equipped with a stem locking device, and an hydraulic means for controlling said device. Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings illustrates a chair system constructed in accordance with my invention.

Figure 2 is a side elevational view of my improved chair.

Figure 3 is an enlarged vertical sectional view, through the pedestal of the chair, showing the piston or stem that carries the seat frame arranged in its lowermost position.

Figure 4 is a horizontal sectional view, taken on the line 4—4 of Figure 3.

Figure 5 is a fragmentary vertical sectional view of the stem and socket, showing the pipe in the stem through which the hydraulic operating medium is conducted into and out of the space between the lower end of the stem and the bottom of the socket in which the stem reciprocates.

Figure 6 is a horizontal sectional view, taken on the line 6—6 of Figure 3.

Figure 7 is a top plan view of the stem and certain of the parts carried by same, partly broken away.

Figure 8 is a vertical sectional view, taken

on the line 8—8 of Figure 7, looking in the direction indicated by the arrows.

Figure 9 is a horizontal sectional view, taken on the line 9—9 of Figure 8.

Figure 10 is a horizontal sectional view, taken on the line 10—10 of Figure 8.

Figure 11 is a view of the valve mechanism, comprising a horizontal section and a vertical section, illustrating the valve mechanism set or adjusted so as to raise the seat.

Figure 12 is a similar view, showing the valve mechanism set or adjusted so as to lower the seat.

Figure 13 is a view of the valve mechanism, comprising a horizontal section and a vertical section, illustrating the valve mechanism set or adjusted so as to move the back upwardly from its reclining position; and

Figure 14 is a view similar to Figure 13, showing the valve mechanism set or adjusted so as to swing the back downwardly from its normal upright position.

*General description of chair and system*

I have herein illustrated my invention embodied in a barber's chair or similar chair of the kind that is equipped with a vertically-adjustable seat A, a back B that can be swung upwardly and downwardly relatively to the seat so as to arrange the back either in an upright position, shown in Figure 2, or in an inclined position, commonly referred to as the reclining position of the back, a swinging apron C arranged at the front edge of the seat, and arms D combined with the apron and the back in such a way that the apron will swing in a direction opposite to the direction of movement of the back during the operation of adjusting or moving the back relatively to the seat. The seat, back and apron are carried by a seat frame E, which is connected to the upper end of a vertically-movable piston or stem F that reciprocates in a vertically-disposed cylinder or socket G that is sustained and surrounded by a pedestal H which rests upon the floor of the room in which the chair is located, the stem F being provided at its upper end with a horizontally-disposed flange 1, as shown in Figure 7, to which the seat frame is attached. The upward movement of the seat frame E and the parts carried by same is effected by admitting a non-compressible liquid under pressure, such as oil, into the space between the lower end of the stem F and the bottom of the socket G, and the downward movement of said seat frame is effected by permitting said liquid to escape from said space. The movement of the back relatively to the seat, into and out of its reclined position, is effected by causing the hydraulic operating medium, to wit, the non-compressible liquid under pressure, to act directly upon a piston I that is reciprocatingly mounted in a horizontally-disposed cylinder J carried by the flange 1 at the upper end of the stem and provided with a piston rod 2 (see Figures 7 and 8) that is attached by a link 3 to the apron C. Normally, the seat frame is held against rotary movement by a locking device K consisting of a segmental-shaped member arranged in a slot in the stem F, as shown in Figure 8, and adapted to exert sufficient frictional pressure on the side wall of the socket G to prevent the stem from turning or rotating in the socket. Said locking device K is normally maintained in an active or operative condition by the force or pressure which the hydraulic operating medium exerts on a vertically-movable piston L that reciprocates in a cylinder M, as shown in Figure 8, said piston L being provided with a depending piston rod 4 whose lower end acts upon a lever 5 that is adapted to be moved by the piston L in a direction to render the locking device K operative and which is adapted to be moved in the opposite direction, so as to release the stem locking device K, by a spring 6 that exerts pressure on said lever 5 in a direction tending to move the outer end or free end of said lever upwardly.

One advantage of my improved chair is that it is particularly adapted for use in a chair system for barber shops, beauty parlors and the like, that comprises a plurality of chairs, and a supply line N common to all of the chairs of the system filled with an hydraulic medium under pressure that is adapted to be admitted by valve mechanisms under control of the operators in charge of the chairs, to the cylinders associated with the seat frames, with the backs and with the stem locking devices of the chairs, thereby causing the hydraulic medium to act directly on the pistons that are used to effect the movement or change the position of the adjustable elements of the chairs. In such a chair system any suitable means can be used for maintaining the hydraulic operating medium under pressure and for causing said operating medium to circulate from the respective chairs of the system back to the source of supply from which said operating medium is drawn to operate the chairs. Usually, a pressure pump will be used to maintain a non-compressible liquid, such as oil, in the supply line N under pressure, and any suitable means, such as a gravity return system or a suction device, can be used to cause the operating medium to circulate from the chairs back to the device which puts said operating medium under pressure and causes it to remain in readiness to actuate the pistons of any chair when the operator in charge of the chair manipulates the valve mechanism of said chair that controls the operating medium. In the system illustrated in Figure 1 the pressure supply line N leads from a tank O partially filled with oil, and

provided at its upper end with an inlet pipe 7 that leads from the discharge side of a pressure pump 8 driven by any suitable source of power, such, for example, as an electric motor 9, the pressure that is produced in the tank O by the pressure pump 8 causing the hydraulic operating medium in the supply line N to be maintained under pressure. The system comprises a return line N′, common to all of the chairs of the system, that leads to a tank O′, shown in Figure 1, whose lower end is connected by means of a pipe 10 with the inlet of the pressure pump 8, thereby causing oil to be withdrawn from the tank O′ and pumped into the tank O when the pump 8 is in operation. The pipe 10 is provided with a check valve 10ª arranged so that the oil can flow only in one direction through said pipe, i. e., upwardly from the tank O′ into the inlet of the pressure pump 8. Any suitable means can be used to maintain a certain approximate pressure in the supply tank O, one means that is suitable for this purpose consisting of a by-pass 11 connected to the lower end portions of the tanks O and O′ and provided with a pressure relief valve 12 set or adjusted so that when a certain approximate pressure is created in the tank O, said valve will open and thus permit the oil to circulate from the tank O through the by-pass 11 into the tank O′. If desired, the system may comprise a suction pump 13 operated by the motor 9, and having its intake 14 connected with the upper end portion of the tank O′, so as to produce or create a partial vacuum in the tank O′ that insures the hydraulic operating medium returning from the chairs back to the tank O′ from which the pressure pump 8 draws its source of supply of liquid. Whatever means is used to maintain the hydraulic operating medium under pressure and to produce circulation of said operating medium, it is essential that the system be so constructed and arranged that the cylinders of the chairs of the system may be placed in direct communication with the pressure supply line N when the valve mechanisms of the chairs are manipulated to adjust or operate the chairs, thereby causing the pressure that exists in the supply line N to be exerted directly on the pistons associated with the cylinders of the chairs, through the agency of columns of non-compressible liquid.

*Seat controlling mechanism*

Each chair of the system is equipped with a valve mechanism that is preferably mounted at the upper end of the stem F inside of same, so that it will not add materially to the overall length of the stem, and thus restrict the range of vertical movement of the stem. Said valve mechanism comprises a valve casing P provided with two valves R and S, the valve R being used to govern the vertical adjustments of the seat frame E and also to control the stem locking device K. The valve S, hereinafter described in detail, governs the adjustment of the back. The cylinder M, previously described, that is associated with the stem locking device K, is formed in the valve casing P, as shown in Figures 8 and 9. The valve R, which I will refer to as the raising and lowering valve, consists of a vertically-disposed, tapered plug oscillatingly mounted in the valve casing P and provided with an internal passageway or port 15 and two external passageways or ports 16 and 17, as shown more clearly in Figure 11. When said valve is turned into the position shown in Figure 11 the internal passageway 15 of same will establish communication between a vertically-disposed inlet duct 18 in the valve casing, located at approximately the center of said casing, and a passageway 19 in the valve casing whose outer end communicates with a pipe 20 arranged vertically inside of the stem F, with its lower end terminating in the bottom end wall of the stem, as shown in Figure 5, the stem F being preferably made hollow so that it will serve as a sump or discharge reservoir for the hydraulic operating medium after said operating medium has performed its function. At such times the external passageway 17 of the valve R establishes communication between the cylinder M in the valve casing and a discharge port 21 that terminates in the periphery or exterior of the valve casing. The inlet duct 18 in the valve casing is in direct communication at all times with an extensible conduit T, shown in Figure 3 and hereinafter more fully described, that leads from the pressure supply line N and extends upwardly through the stem, said extensible conduit T and the inlet duct 18 in the valve casing being normally filled with liquid that is maintained under the same pressure as the liquid in the supply line N. In this position of the valve R, i. e., the position shown in Figure 11, the hydraulic operating medium will pass through the internal passageway 15 in the valve R, thence downwardly through the pipe 20 into the space between the lower end of the stem F and the bottom of the socket G, as indicated by the arrows, and exert pressure on the stem in a direction to raise said stem and the parts of the chair carried by same. During the upward movement of the stem F, the locking device K for said stem is in an inactive or inoperative condition, thus permitting the stem and the seat frame of the chair to be revolved. This inactive or inoperative condition of the stem locking device was effected by the escape of the operating medium from the cylinder M in the valve casing through the external passageway 17, in the valve R when said valve was moved from its neutral position into its rais-

ing position, shown in Figure 11. Preferably, the valve R is so constructed that the external passageway 17 in same moves into registration with the discharge port 21 in the valve casing and with a passageway 22 in the upper end portion of the side wall of the cylinder M before the internal passageway 15 of the valve R moves into registration with the inlet duct 18 and the passageway 19 in the valve casing, thereby permitting the operating medium to escape from the cylinder M and release the stem locking device K before the stem starts to move upwardly. The liquid operating medium that escapes from the cylinder M discharges through the port 21 in the valve casing, downwardly into the hollow interior of the stem F that constitutes the sump or discharge reservoir for the operating medium, the said liquid being positively expelled from the cylinder M by the upward movement produced on the piston L by the expansion of the spring 6 which constantly exerts upward pressure on the outer end or free end of the actuating lever 5 of the stem locking device.

When the valve R is moved into its other position, shown in Figure 12, which position I will refer to as its lowering position, the internal passageway 15 of said valve will establish communication between the passageway 19 in the value casing and a separate discharge port 23 whose outer end terminates in the exterior of the valve casing, thereby causing the liquid in the space between the lower end of the stem F and the bottom of the socket G to flow upwardly through the pipe 20, thence through the internal passageway 15 of the valve R and finally discharge through the port 23 in the valve casing downwardly into the sump or internal space of the stem, as indicated by the arrows in Figure 12, the operating medium being positively forced out of or expelled from the space between the lower end of the stem and the bottom of the socket by the pressure which the weight of the stem and the load thereon exerts on said operating medium. In this position of the valve R, i. e., its lowering position, the external passageway 16 in the periphery of said valve establishes communication between the discharge port 21 in the valve casing and the passageway 22, previously described, in the upper end portion of the side wall of the cylinder M, thereby relieving the pressure on the piston L and permitting the stem locking device K to assume an inactive or inoperative position. The external port 16 is of similar construction to the external port 17, previously described, in that it is so proportioned and designed that when the valve R is moved to its lowering position, the pressure on the piston L associated with the stem locking device will be relieved, thereby rendering the stem locking device inoperative before the internal passageway 15 of the valve R reaches such a position as to permit the liquid that sustains the stem to escape from the space between the lower end of the stem and the bottom of the socket or cylinder in which said stem operates.

If the valve R is moved from its lowering position into its neutral position, shown both in Figure 13 and in Figure 14, while the stem F is moving upwardly, the supply of operating medium to the vertically-disposed pipe 20 inside of the stem will be cut off and the operating medium which has been admitted to the space between the lower end of the stem and the bottom of the socket G, will become trapped in said space, thereby causing the stem to come to rest and remain at the level at which it stood when the internal passageway 15 of the valve R moved out of registration with the passageway 19 in the valve casing. Likewise, if the valve R is moved from its lowering position shown in Figure 12, into its neutral position, the escape of the operating medium from the space between the end of the stem and the bottom of the socket through the pipe 20 will be cut off, with the result that the stem will come to rest at the level at which it stood when the internal passageway 15 of the valve moved out of registration with the passageway 19 in the valve casing. Movement of the valve R into its neutral position causes the stem locking device K to become operative automatically, due to the fact that the external passageway 17 of the valve R moves into registration with the inlet duct 18 in the valve casing and the passageway 22 in the upper end of the cylinder M, and thus permits the operating medium to enter said cylinder, as indicated by the arrows in Figure 8 and exert pressure on the piston L in a direction to force it downwardly in opposition to the spring 6.

While I prefer to construct the valve mechanism in such a way that the valve R which controls the raising and lowering of the seat of the chair, also controls the stem locking device K and causes said stem locking device to be released automatically when said valve is manipulated to effect a change in the position of the seat, and to be rendered operative automatically when said valve is restored to its neutral position, it is not absolutely essential that the valve mechanism be constructed in this way. The essential thing, so far as the stem locking device is concerned, is that it be governed by an hydraulic medium which is controlled by a valve means, preferably a valve means designed so that the stem locking device will be released just before the stem starts to move to change the position of the seat, and will be rendered operative just after the stem comes to rest after it has been actuated to effect a

change in the position of the seat. I prefer, however, to construct the valve mechanism in the manner above described, because such a valve mechanism comprises a single valve, to wit, the valve R, that governs the raising and lowering of the seat and also governs the device that normally holds the seat against rotary movement, and it insures the seat of the chair being held securely against rotary movement at all times, except when the seat is being raised or lowered or revolved, by a locking device that is governed by the hydraulic medium that is used to raise and lower the seat.

*Back controlling mechanism*

The valve S, previously referred to, that governs the back B of the chair is so constructed that when said valve is set in its neutral position, the back will be held securely in the position to which it has been moved, and the movement of said valve in opposite directions from its neutral position will cause the back to be raised or lowered. The valve S is also preferably of the plug type and is oscillatingly mounted in the valve casing P, as shown in Figures 11 to 14, inclusive. Said valve S is provided with two external passageways 24 and 25 arranged at opposite sides of the valve. When said valve is moved into the position shown in Figure 14, the passageway 24 will establish communication between the inlet duct 18 in the valve casing and a passageway 26 in the valve casing that is connected with a pipe 27 which leads to the outer end of the cylinder J, thereby causing the operating medium to pass from the source of supply, to wit, the extensible conduit T, into the outer end of the cylinder J, as indicated by the arrows shown in Figure 14 and exert pressure on the piston I in a direction to move said piston inwardly, with the result that the apron C of the chair will swing upwardly and the back will swing downwardly towards or into its reclining position. In this postion of the valve S the other external passageway 25 in the valve establishes communication between a discharge port 28 in the valve casing that terminates in the underside of said casing and a passageway 28ª in the valve casing that communicates with a pipe 29 which is attached to the inner end of the cylinder J, thereby causing the operating medium in said cylinder that is located in front of the piston I to be positively expelled through the pipe 29, as indicated by the arrows in Figure 14, and discharged through the port 28 into the sump formed by the hollow stem of the chair.

When the valve S is moved into its other position, shown in Figure 13, the external passageway 25 in said valve establishes communication between the inlet duct 18 in the valve casing and the pipe 29 attached to the inner end of the cylinder J, and the passageway 24 in said valve establishes communication between the discharge port 28 in the valve casing and the pipe 27 that is attached to the outer end of the cylinder J, thereby causing the operating medium to be admitted to the inner end of the cylinder J, with the result that the piston I will move outwardly and cause the back of the chair to be restored to or moved towards its upright position, the operating medium in the outer end portion of the cylinder J escaping from same through the pipe 27, and discharging into the sump. When the valve S is moved from either of its positions above described into its neutral position, shown in Figures 11 and 12, communication is cut off between the inlet duct 18 in the valve casing and both ends of the cylinder J, and communication is also cut off between both ends of said cylinder and the discharge port 28 in the valve casing. Accordingly, the back of the chair will be held securely locked in the position into which it has been moved by the same means or medium which is used to effect the adjustment of the back.

*Extensible conduit and overflow pipe*

The valve casing P is preferably constructed from a casting positioned inside of the upper end portion of the stem F, as shown in Figure 3, and supported by an inwardly-projecting flange or rib 30 on the stem, as shown in Figure 3. The extensible conduit T, previously referred to, that is used to conduct the operating medium from the supply pipe N to the inlet duct 18 in the valve casing P may be any suitable type or kind of conduit that will provide for the vertical movement of the stem upwardly and downwardly. In the form of my invention herein illustrated said extensible conduit T is composed of a movable section or tube 31 that projects downwardly from the valve casing, and a stationary section or tube 32 arranged in telescopic relation with said movable tube 31 and having its lower end in communication with a branch 33 leading from the pressure supply line N, the joint or space between said tubes 31 and 32 being closed by a packing 34 of any suitable kind that makes said joint tight. In order that the operating medium which is discharged into the hollow stem F from the valve mechanism will be returned automatically to the source of supply, or rather, to the return pipe N′ of the system, a stationary overflow pipe 35 is attached to the bottom of the socket G and extends upwardly through a hole in the lower end of the stem F, said stem being provided with a packing 36 of any preferred kind, so as to maintain a tight joint between the stem and the stationary, vertically-disposed overflow pipe 35 on

which it slides. At the lower end of the overflow pipe 35 is a chamber 37 which communicates with the interior of said pipe, said chamber 37 being connected by a branch 38 with the return pipe N′ of the circulating system. This chamber 37 can be of any preferred construction, but it is herein illustrated as being formed by two horizontally-disposed plates 39 and 39ª arranged in superimposed relation at the lower end of the socket G and combined with the same in such a way that the plate 39ª forms the top wall of the chamber 37 and also serves as the bottom of the socket G, the pipe 35 being connected to said top plate 39ª and the stationary tube 32 of the extensible conduit T being rigidly connected to the bottom plate 39. The branch 38 on the return pipe N′ is connected to a cored passageway in the bottom plate 39, as shown in Figure 6, and a discharge hole 40 is formed in said plate so as to establish communication between the chamber 37 and the cored passageway in the plate to which the branch 38 is connected. When the stem of the chair moves upwardly, as shown in Figure 11, the operating medium in said stem will escape from same by flowing over the top edge of the overflow pipe 35, and thence downwardly through said pipe into the chamber 38 at the lower end of the socket, said escaping liquid flowing through the discharge outlet 40 of the chamber 37 into the return pipe N′ and thence back to the tank O′.

From the foregoing it will be seen that in my improved chair an hydraulic operating medium under pressure is always maintained in readiness to exert pressure on the pistons associated with the seat, back and stem locking device whenever the valve mechanism is manipulated to operate the chair, the act of opening a valve of said mechanism causing the pressure that exists in the supply line N to be exerted directly on the piston or other part controlled by said valve through the agency of substantially a solid column of non-compressible liquid. After performing its function said operating medium escapes from the cylinder to which it was admitted, back to the sump formed by the hollow stem of the chair, and thence from said sump back to the source of supply through the return line N′, the sump being of such a character that the operating medium will drain out of same automatically when the operating medium in the sump reaches a certain level. In addition to the desirable features or characteristics above pointed out, a chair of the construction above described is quiet in operation, due to the fact that the medium used to operate the chair is not permitted to exhaust to the atmosphere, and it is easy to keep clean and in a sanitary condition, due to the fact that the operating medium is confined in a closed circulating system from which it cannot escape and collect on exposed parts of the chair.

*Operating means for valve mechanism*

The means that is used to actuate the valves of the valve mechanism consists of a horizontally-disposed operating shaft U arranged transversely of the seat frame E of the chair, beneath the seat, a longitudinally-shiftable rod W in the shaft U, a handle X on the shaft U by which said shaft can be rocked in opposite directions, and a device Y in the handle X that is capable of being oscillated in opposite directions, so as to reciprocate the rod W. The shaft U is journaled in bearings 41 on the valve casing P and is provided with a toothed member, preferably a beveled gear 42, that meshes with a beveled gear 43 attached to the upper end of the valve R. At a point in proximity to the valve S an elongated slot or opening 44 is formed in the shaft U, as shown in Figure 7, and the rod W is provided with an arm 45 that projects through said slot, said arm 45 being connected to the valve S in any suitable way, as, for example, by an upwardly-projecting arm 46 on the valve S that projects into a bifurcated portion of the arm 45, as shown in Figures 7 and 8. The device Y, previously referred to, that is oscillatingly mounted in the handle X, is provided at its upper end with a knob or finger piece 47 that can be grasped to turn the device Y, and the lower end portion of said device is provided with a bifurcated arm 48, shown in Figure 7, that straddles or embraces a pin 49 on the rod W. With a valve operating means of the construction above described the operator in charge of the chair can effect the adjustment of all of the parts of the chair with one hand. For example, if it is desired to raise the seat, the operator merely rocks the arm X in one direction, thereby causing the valve R to be moved into such a position as to cause the operating medium to exert upward pressure on the stem F and cause said stem and the parts carried by same to move upwardly, it being of course understood that the movement of the valve R towards its raised position shown in Figure 11 causes the stem locking device K to be released before the operating medium exerts pressure on the stem in a direction to move it upwardly. When the handle is restored to its normal upright position, indicated in Figures 13 and 14, the stem comes to rest, and thereafter, the stem locking device K becomes operative, thus causing the seat frame to be maintained at the level at which it stopped, and held securely against rotary movement. If the seat of the chair is in an elevated position and it is desired to lower the seat, the operator simply has to swing the handle X in the opposite direction from neutral position, so as to permit the operating medium confined in the space between the lower end of the stem and

the bottom of the socket to escape from said space and discharge into the sump formed by the hollow stem of the chair, it being possible to arrest the downward movement of the stem at any point, simply by restoring the operating handle X to its upright position, which movement of the operating means also causes the stem locking device to become operative. The back B of the chair can be moved downwardly towards or into its reclining position, simply by turning the button or knob 47 at the upper end of the device Y in one direction, so as to cause the operating medium to move the piston I inwardly, and after the back has reached the position desired by the operator, said button 47 can be restored to its neutral position so as to trap the operating medium in the cylinder J on both sides of the piston I, and thus securely hold the back in its adjusted position. To restore the back to its normal upright position, the operator turns the button 47 in the opposite direction, thereby causing the operating medium to exert pressure on the piston I in a direction to force said piston outwardly or towards the outer end of the cylinder J in which it moves.

A chair system of the character above described is superior in many respects to the conventional chair systems used in barber shops, beauty parlors and similar establishments, due to the fact that it comprises one source of power for operating all of the chairs of the system, to wit, an hydraulic medium under pressure, that is governed by valve mechanisms on the chairs, which are of such construction that no means or agency other than the hydraulic operating medium is required to actuate or move the adjustable elements of the chairs, such as the seats, backs and stem locking devices. Said hydraulic operating medium is confined in a closed circulating system and is always in readiness to act upon the pistons of each chair of the system, and another advantage of such a system is that it is quiet in operation, and also clean and sanitary. By employing an hydraulic medium confined in a pressure supply line common to a plurality of chairs, to operate said chairs, I overcome the necessity of equipping each chair with an individual pump or similar pressure producing device. Accordingly, I am able to reduce the cost of the chair equipment of barber shops and similar establishments. By arranging the valve mechanism of the chair on the inside of the stem, I am able to build a chair whose seat has a relatively great range of vertical movement, notwithstanding the fact that the socket of the chair is relatively short. A valve mechanism equipped with plug type valves, as herein described, is inexpensive to construct, it is reliable in operation and it permits the use of an operating means that can be easily controlled or actuated by one hand of the operator in charge of the chair, to govern the adjustment of all of the parts of the chair.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a barber's chair or the like of the hydraulic type, a vertically-adjustable, hollow stem that serves as a sump or discharge reservoir for the hydraulic medium used to operate the chair, and an overflow pipe arranged so that when the stem moves upwardly the operating medium in said sump will escape automatically from same through said overflow pipe.

2. In a barber's chair or the like of the hydraulic type, a vertically-disposed socket, a hollow stem reciprocatingly mounted in said socket, that carries the seat frame of the chair, a valve mechanism at the upper end of the stem adapted to be actuated to permit an hydraulic operating medium under pressure to be admitted to the space between the bottom of the socket and the end of the stem for raising the stem and to be discharged from said space into the interior of the stem for lowering the stem, an overflow pipe projecting upwardly from the bottom of the socket through a hole in the lower end of the stem, and an extensible conduit leading from said valve mechanism to a pressure line through which the operating medium is supplied to the valve mechanism.

3. In a barber's chair or the like of the hydraulic type, a vertically-disposed socket, a hollow stem reciprocatingly mounted in said socket, that carries the seat frame of the chair, a valve mechanism at the upper end of the stem arranged inside of same and adapted to be manipulated to cause an operating medium under pressure to be admitted to or exhausted from said socket to raise or lower the stem, said valve mechanism comprising a port or outlet through which the operating medium is discharged into the stem after said operating medium has performed its function, a pressure supply line that always remains in direct communication with the inlet duct in said valve mechanism, and means for preventing the exhaust operating medium from rising above a certain level in the stem.

4. A chair provided with a vertically-adjustable seat, a back that can be moved relatively to said seat, a locking device for holding the seat against rotary movement, a cylinder and piston associated with each of said elements for effecting the movement of same, a valve mechanism for controlling the admission and discharge of an hydraulic operating medium under pressure to and from said cylinders, and an operating means for said valve mechanism comprising one member that is adapted to be moved in opposite directions to raise and lower the seat and control said locking device, and a different mem-

ber that is adapted to be moved in opposite directions to shift the back into and out of its reclining position.

5. A chair provided with a vertically-adjustable seat, a back that can be moved relatively to the seat, a locking device for holding the seat against rotary movement, cylinders provided with pistons for effecting the movement of said elements, a valve mechanism for controlling the admission and discharge of an hydraulic operating medium under pressure to and from said cylinders, comprising one valve that is adapted to be manipulated to release the locking device and thereafter cause the seat to move, and another valve that is adapted to be manipulated to cause the back to move.

6. A barber's chair or the like provided with a vertically-adjustable seat, a back that can be moved relatively to the seat, a locking device for holding the seat against rotary movement, separate cylinders associated with said seat, back and locking device and provided with pistons for moving said elements, a valve mechanism for admitting an hydraulic medium under pressure to and from said cylinders, an operating means for said valve mechanism comprising a controlling member that is adapted to be swung in one direction from a neutral position to release the locking device and raise the seat, or swung in the opposite direction from its neutral position to release the locking device and lower the seat, and a part carried by said controlling member that is adapted to be shifted in opposite directions to move the back into and out of its reclining position.

7. In a barber's chair or the like of the hydraulic type, a seat that is adapted to be raised, lowered and rotated, a controlling means for the hydraulic operating medium that moves with the seat, and conduits through which the hydraulic medium is supplied to and conducted away from said controlling means, composed of elements arranged in telescopic and rotating relationship.

8. In a barber's chair or the like of the hydraulic type, a stem that carries the seat frame of the chair reciprocatingly mounted in a vertically-disposed socket, a valve mechanism arranged at the upper end of said stem and provided with valves for controlling an hydraulic operating medium under pressure that is used to raise and lower the seat and move the back relatively to the seat, and an operating means for said valve mechanism comprising a rock shaft that actuates one of the valves, and a reciprocating rod in said shaft that actuates a different valve of the valve mechanism.

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