(No Model.) 2 Sheets—Sheet 1.

# H. L. ANDREWS.

## TYPE WRITER'S CHAIR.

No. 552,502. Patented Jan. 7, 1896.

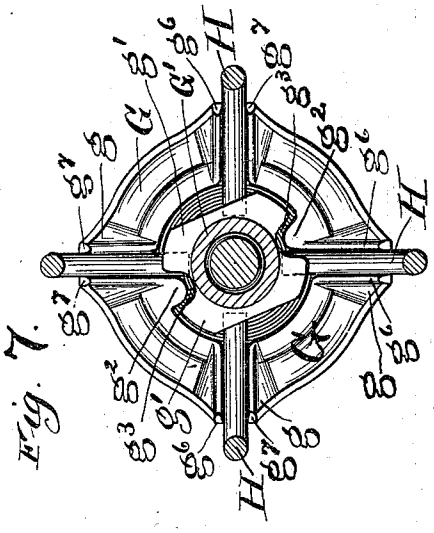

Fig. 7.

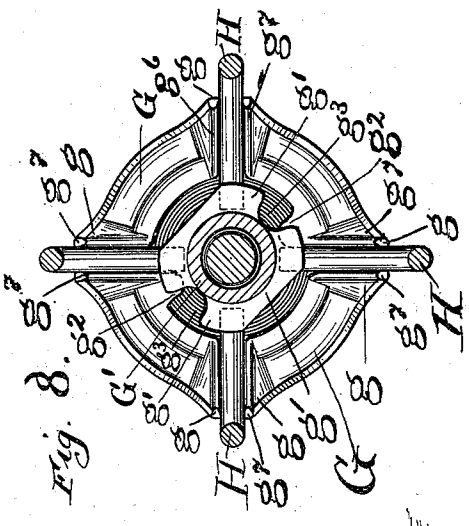

Fig. 8.

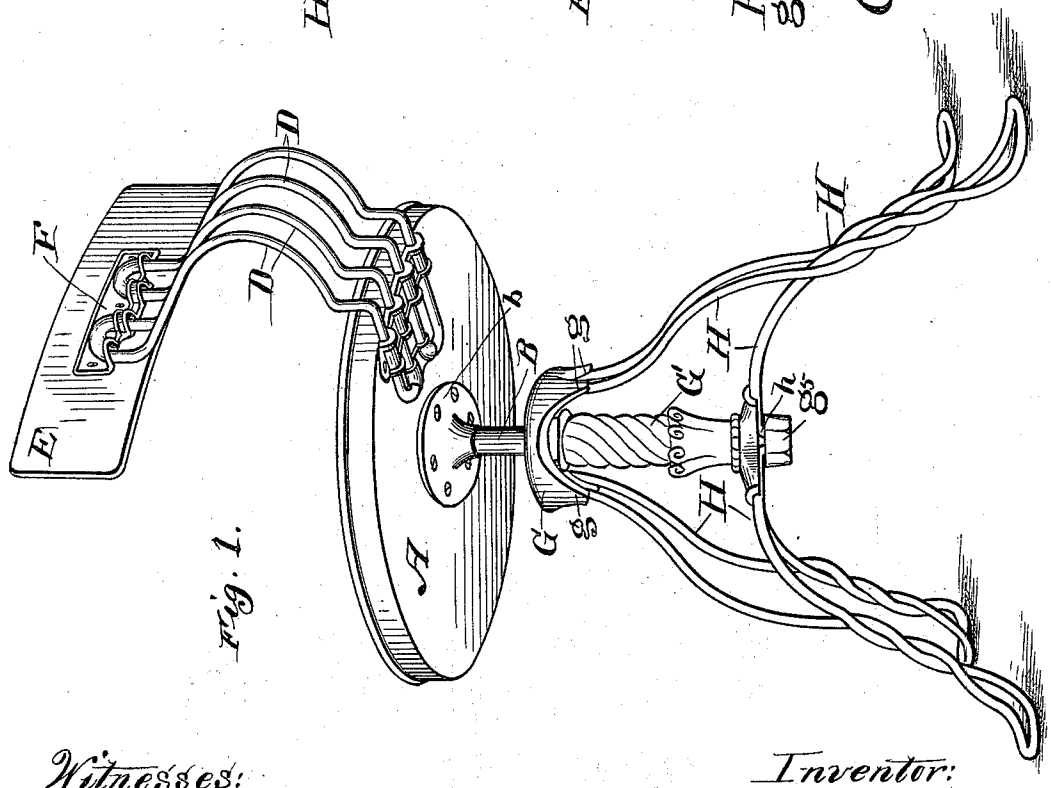

Fig. 1.

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Flora L. Brown.

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(No Model.) 2 Sheets—Sheet 2.

# H. L. ANDREWS.

## TYPE WRITER'S CHAIR.

No. 552,502. Patented Jan. 7, 1896.

Fig. 2.

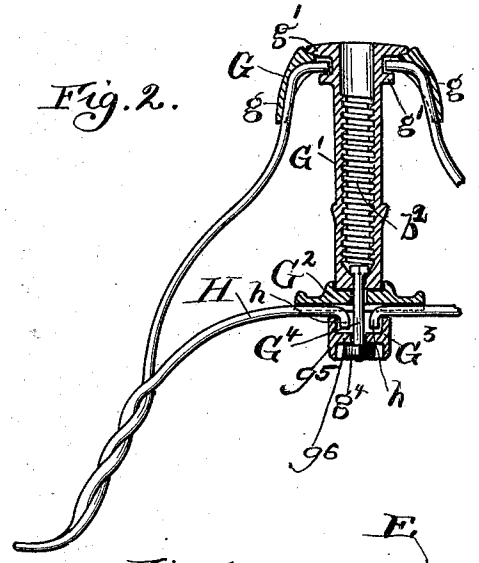



Fig. 5.

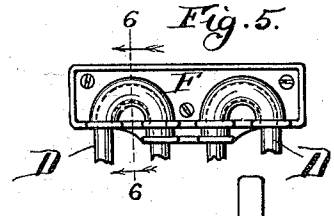
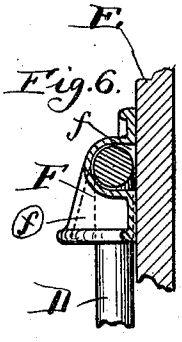



Fig. 6.



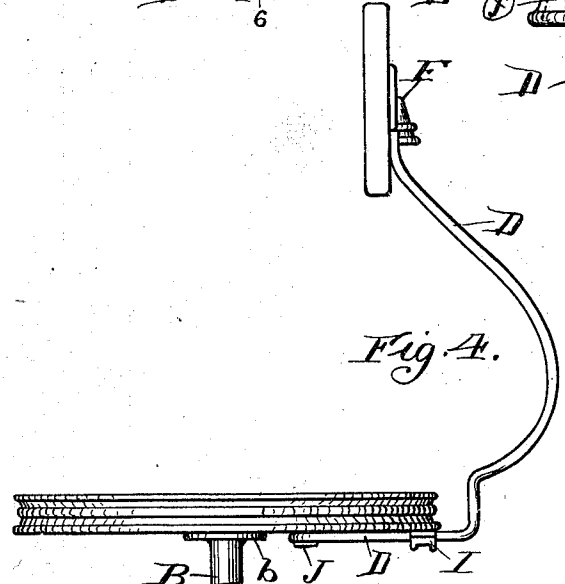
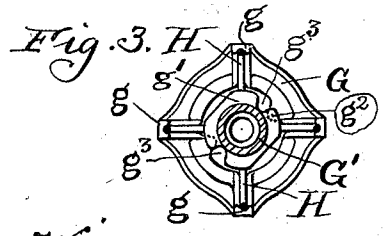
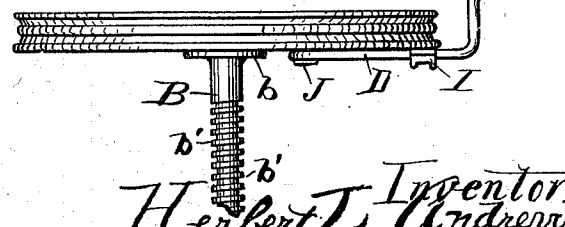




Fig. 4.

Fig. 3.




Witnesses:
R. J. Jaeker,
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Inventor:
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# UNITED STATES PATENT OFFICE.

HERBERT L. ANDREWS, OF CHICAGO, ILLINOIS.

## TYPE-WRITER'S CHAIR.

SPECIFICATION forming part of Letters Patent No. 552,502, dated January 7, 1896.

Application filed February 28, 1895. Serial No. 540,123. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT L. ANDREWS, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Type-Writer Chairs, of which the following, when taken in connection with the drawings accompanying and forming a part hereof, is a full and complete description, sufficient to enable those skilled in the art to which it appertains to understand, make, and use the same.

The objects of my invention are to obtain a type-writer chair—that is, a chair adapted to be used by a type-writer operator—wherein the back shall come at a point or place on or against the back of the person using the same best situated to support and sustain such person; to obtain a chair of the kind named wherein the back will be adjustable in reference to the seat thereof, so that such back can be adjusted for different persons and for the peculiarities of the person using it; to obtain a chair wherein the part of the back coming in contact with the back of the person using it shall be automatically adjustable thereto; to obtain a chair of the kind described wherein the seat can be raised or lowered to suit the person using it, and to obtain a chair whereof the legs may be made of wire or other metal, the several parts being readily joined together and present a neat and sightly appearance.

I have illustrated the chair embodying my invention by the drawings referred to as forming a part of this specification, wherein—

Figure 1 is a perspective view of the bottom and back of the chair. Fig. 2 is a vertical sectional view of the central frame of the legs of the chair and showing the legs on opposite sides thereof in elevation; Fig. 3, a horizontal sectional view thereof; Fig. 4, a side elevation of the seat and back of the chair and of the adjusting-screw secured to the bottom of the chair-seat; Fig. 5, a rear elevation of the part or portion of the wire back coming in contact with the bar forming the horizontal cross-piece of the back of the chair and of the plate covering such wire and securing it to the horizontal bar, and Fig. 6 a sectional view on line 6 6 of Fig. 5 viewed in the direction indicated by the arrows. Fig. 7 is a horizontal sectional view, looking up, of the central post and legs of the chair and a bottom plan view of the head of such post and adjacent parts, and Fig. 8 a like view as Fig. 7 with the element holding the parts adjacent to the head of the post in place in a different position from which the same is shown in Fig. 7.

A reference-letter applied to indicate a given part in one of the figures of the drawings is applied to designate such part throughout the several figures of the drawings.

A is the seat of the chair.

B is a post secured to seat A by flange $b$ in the ordinary way, and $b'$ $b'$ are screw-threads on post B fitting into corresponding threads $b^2$ $b^2$ in the vertical hollow post of the central leg-supporting frame of the chair.

D D D D are bent or formed up wire supports, on the upper ends of which are mounted the horizontal bar E and plate F. $f$ $f$ are grooves or channels in the under side of plate F, in which the wire supports D D D D loosely fit. The vertically-extending part of the grooves or channels $f$ $f$ extend downward from the horizontal part of such grooves or channels in an outwardly-flaring direction, thereby allowing horizontal bar E and plate F to rock on the extreme upper end of the wire supports D D D D, and to so automatically adjust such bar E to the back of the person seated in the chair.

The central frame of the chair, to which the legs are secured and by which the seat is supported, is constructed of the following-named parts: ring G, having a horizontal or substantially horizontal table and lugs or projections $g$ $g$, extending outwardly and downwardly therefrom over the upper part of the legs H of the chair, hollow post G′ having flanges $g'$ $g'$ at the upper end thereof and screw-threads $b^2$ $b^2$ therein, bottom plate $G^2$, bottom piece $G^3$ and bolt $G^4$.

$g^2$ $g^2$ are projections extending inwardly from the ring G, and $g^3$ $g^3$ are grooves extending through the lower one of the flanges $g'$ $g'$ on central post G′. The upper one of the flanges $g'$ $g'$ will not extend through the ring G; but the lower one of such flanges will extend through such ring when grooves $g^3$ $g^3$ are in position to permit flanges $g^2$ $g^2$ to extend therethrough, respectively. Hence when the post G′ is put down through ring G, (flanges

$g^2$ $g^2$ passing through grooves $g^3$ $g^3$,) and such post is then turned so that the grooves come into substantially the position relative to flanges or projections $g^2$ $g^2$ in which they are illustrated in Fig. 8, the ring G is held rigidly in place at the top of post G'.

$g^4$ is a nut on the lower end of the bolt $G^4$.

Bottom piece $G^3$ consists of the ring $g^5$ and web $g^6$, and $h$ $h$ are the turned ends of the wires of the legs H H, adapted to form hooks engaging with the inner face of the ring $g^5$.

$g^7$ $g^7$ are ribs on the under side of lugs or projections $g$ $g$, coming adjacent to the upper ends of the legs H H, and preventing swaying of the upper part of such legs.

To make the back of the chair easily adjustable with reference to the seat A thereof, I secure such wires together and to the seat in the following-described way: I is a plate, preferably constructed of metal, having grooves or channels $i$ $i$ $i$ $i$ therein, in which grooves or channels the horizontal portion of the wire supports D D D D loosely fit.

$i'$ $i'$ $i'$ are screws by means of which I secure such plate I to the under side of the chair-seat, and I also place on the wires D D D D the plate J so shaped and secured in place that the upper surface thereof will come in contact with the under surface of the seat A when the horizontal bar E is pressed backward by the back of a person using the chair. The several wires D D fit loosely in the grooves or channels $i$ $i$, so that such plate I forms the fulcrum on which such wires D D turn as the horizontal bar E is pressed backward. By this means I find that the back of the chair can be readily moved backward and forward in the grooves or channels $i$ $i$, to adjust the back of the chair in reference to the seat thereof, while at the same time when the horizontal bar E is pressed backward by the back of a person seated in the chair such back will remain firmly in position, such back, or the wires thereof, turning, as stated, on the plate I as on a fulcrum, and the plate J being pressed upward against the under surface of the seat A.

To adjust the seat of the chair it is merely necessary to turn such seat around, together with the post B, in the ordinary way.

To assemble the several parts forming the legs and central post G', ring G is placed on the under side of ring or flange $g'$—that is, such post G' is put down through ring G, the grooves $g^3$ $g^3$ being in the position relative to lugs, flanges or projections $g^2$ $g^2$ in which they are illustrated in Fig. 7, and legs H H are placed in position against ring G, (the extreme ends of the legs extending between the upper flange $g'$ and the lower one of such flanges $g'$ $g'$,) and the hollow post G' is turned with reference to the ring G until the lugs or projections $g^2$ $g^2$ are under the flange $g'$—that is, the upper ends of such legs H H are in position between such lower flange $g'$ and the ring G, as illustrated in Fig. 8. It is not material, however, whether ring G and post G' be placed in position to each other with lugs or projections $g^2$ $g^2$ underneath flange $g'$ $g'$, as last above described and as illustrated in Fig. 8, after the upper ends of the legs H H are placed in position between ring G and flange $g'$, or before, as such upper ends of the legs H H can be inserted in place, as described, at any time prior to the placing of plate $G^2$ and bottom piece $G^3$ in position and securing them by bolt $G^4$. Plate $G^2$ is then put in place, the bolt $G^4$ inserted through the hole in the end of the hollow post G' and the hole in bottom plate $G^2$, and bottom piece $G^3$ brought against the plate $G^2$ and the ends of legs H H, and nut $g^4$ turned tightly against such bottom piece $G^3$ on the bolt $G^4$.

The wire supports D D D D being loosely inserted in the plate F, it will be found that unless such supports are firmly secured together, as by the plate J, any attempt to move the back forward or backward by moving such supports in the grooves or channels $i$ $i$ $i$ $i$ in plate I will cause such supports to change their relative position in a manner to bind and become disarranged. The plate J therefore serves the double purpose of a friction-plate, preventing the sliding of the supports D D D D in the plate I, and also to bind such supports well together.

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

1. The combination of a central post having a hole extending thereinto from the upper end thereof, and flanges extending outwardly from such upper end, a ring arranged to extend over the lower one of such flanges when the flanges and the ring are in proper relative position, but not over the upper one thereof, and neither of such flanges extending through the ring when the lower flange and the ring are in proper relative position to lock the ring on the post, bent up wire legs, the upper end of the wire whereof the legs are formed extending between the flanges and underneath the ring, a bottom plate on which the hollow post rests, and against the under side of which the other end of the wire of the bent up wire legs comes in contact, a bottom piece coming in contact with the under side of the wire, and a bolt having a nut thereon, such bolt extending from the central post, through the bottom plate and the bottom piece and thereby holding the legs and the several parts supporting the seat rigidly together and in proper relative position; substantially as described.

2. The combination of a central post having flanges extending outwardly therefrom at the upper end thereof, the lower one of such flanges having grooves extending parallel with the axis of the post, a ring having projections extending inwardly therefrom, corresponding when in proper relative position, with the grooves through the lower one of the flanges named, and when in such position such ring arranged to pass over the lower one of the flanges but not over the upper one

thereof, such post and ring arranged to turn relative to each other so as to bring the flange having the grooves therein over the inwardly extending projections and hold the ring in place on the post, a bottom plate on which the post rests, a bottom piece underneath the bottom plate, legs arranged, by forking the upper ends thereof, so that the ends of one of such forks shall be placed between the flanges on the central post, and so that the other ends of such forks shall be placed between the bottom plate and the bottom piece, and a bolt extending from the central post through the bottom plate and the bottom piece, and a nut on the bolt, thereby securing all the several parts in position; substantially as described.

3. The combination of a central post having flanges extending outwardly therefrom at the upper end thereof, the lower one of such flanges having grooves extending parallel with the axis of the post, a ring having projections extending inwardly therefrom, corresponding when in proper relative position, with the grooves through the lower one of the flanges named, and when in such position such ring arranged to pass over the lower one of the flanges but not over the upper one thereof, such post and ring arranged to turn relative to each other so as to bring the flange having the grooves therein over the inwardly extending projections and hold the ring in place on the post, a bottom plate on which the post rests, a bottom piece underneath the bottom plate, such bottom piece having upwardly extending abutments, legs forked at the upper ends thereof, the lower ones of the forks having downwardly extending abutments, respectively, and the legs arranged so that the upper ones of the forks extend between the flanges on the central post and the lower ones thereof extend between the bottom piece and the bottom plate, with the abutments on the bottom piece engaging with the abutments on the lower ones of the forks, and a bolt extending from the central post through the bottom plate and the bottom piece, with a nut on the bolt securing all the several parts in position; substantially as described.

4. The combination of a horizontal bar, a plate secured to the bar, and bent up wires, such bar, plate and wires forming the back of a chair, and such plate having grooves in which the bent up wires loosely fit at the upper ends thereof, and such grooves flaring downwardly and outwardly from the bend in the wires, and a plate at the other end of the wires securing them rigidly together; substantially as described.

5. The combination of a horizontal bar, a plate secured to the bar, bent up wires, and a plate at the lower end of the wires securing them rigidly together, the plate secured to the bar having grooves therein in which the bent up wires loosely fit at the upper ends thereof and such grooves flaring downwardly and outwardly from the bend in the wires, and a plate having grooves on the upper side thereof secured to the under side of the seat of a chair so that such grooves are adjacent to the seat and so that the bent up wires shall fit loosely in the grooves and slide therein with the plate connecting the wires together in contact with the bottom of the seat and forming a friction plate; substantially as described.

HERBERT L. ANDREWS.

In presence of—
FLORA L. BROWN,
CHARLES TURNER BROWN.