No. 681,989. Patented Sept. 3, 1901.

H. SHUART & O. B. THOMPSON.

REGISTERING CHAIR.

(Application filed Dec. 21, 1900.)

(No Model.)

FIG. 1.

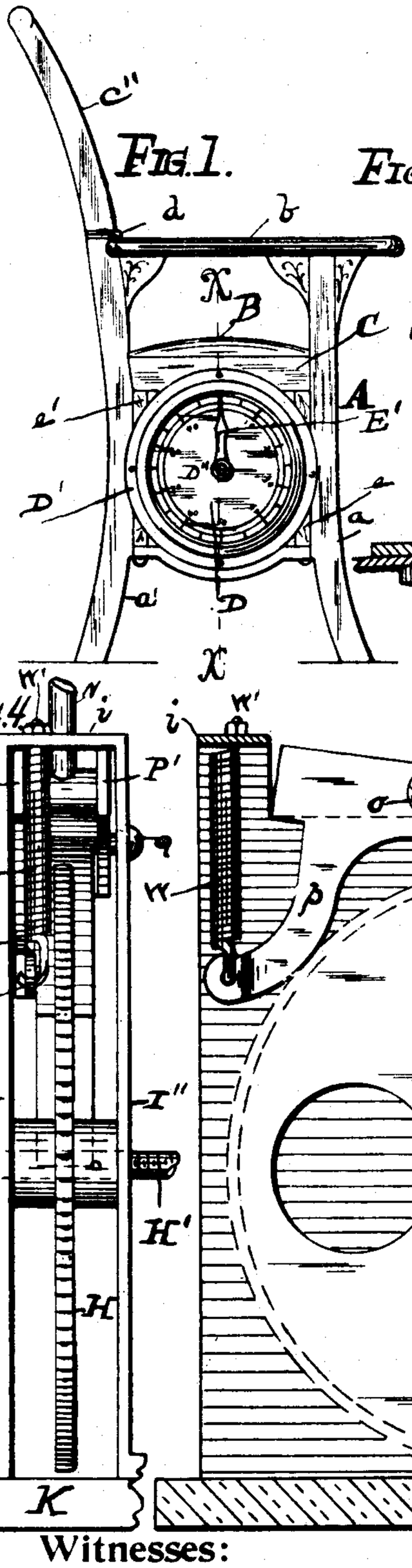

FIG 5

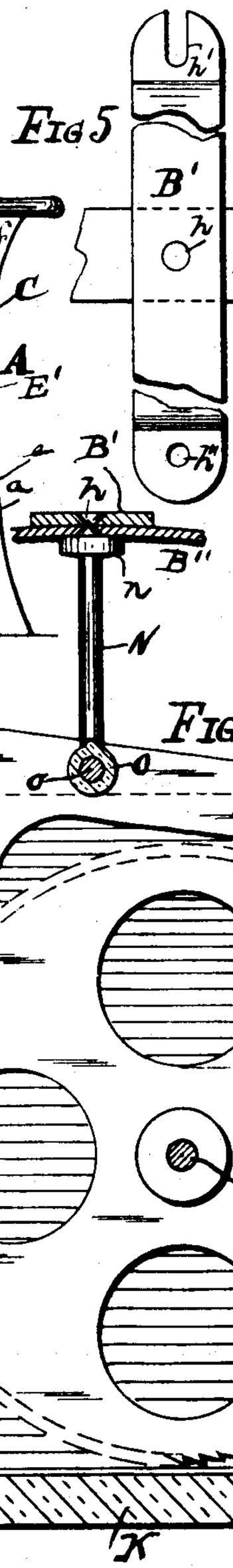

FIG 2.

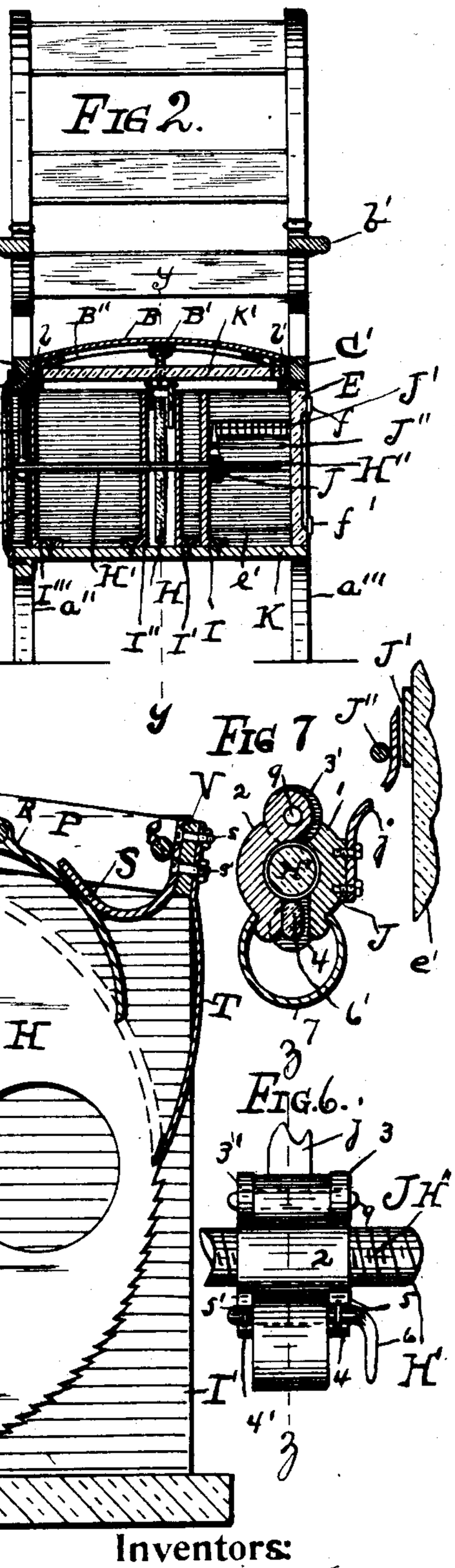

FIG. 4.

FIG 3

FIG 7

FIG. 6.

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UNITED STATES PATENT OFFICE.

HENRY SHUART, OF BUFFALO, AND ORON BIARD THOMPSON, OF NORTH TONAWANDA, NEW YORK.

REGISTERING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 681,989, dated September 3, 1901.

Application filed December 21, 1900. Serial No. 40,642. (No model.)

To all whom it may concern:

Be it known that we, HENRY SHUART, a resident of Buffalo, in the county of Erie, and ORON BIARD THOMPSON, a resident of North Tonawanda, in the county of Niagara, State of New York, citizens of the United States, have invented certain new and useful Improvements in Registering-Chairs; and we do hereby declare that the following description of our invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in registering-chairs; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as will hereinafter be first fully set forth and described and then set out in the claim.

In the drawings already referred to, which serve to illustrate our invention more fully, Figure 1 is a side elevation of a chair embodying our invention. Fig. 2 is a vertical sectional elevation in line X X of Fig. 1. Fig. 3 is a sectional view of a portion of the device in line Y Y of Fig. 2. Fig. 4 is an end elevation of that portion of our invention illustrated in section in Fig. 3. Fig. 5 is a plan of the blade-springs used in the seat of our chair, parts being broken away. Fig. 6 is an elevation of the split nut within the body of the chair and used for registering purposes. Fig. 7 is a sectional view of said nut in line Z Z of Fig. 6.

Like parts are designated by corresponding reference symbols in all the figures.

The object of our invention is the production of an efficient registering-chair for the use of barbering and bootblacking establishments, observation-platforms, and, in fact, for all purposes wherein the occupancy of said chairs is an element of revenue. The essence of our improvement consists of an automatically-actuated registering device which of and in itself by the seating of a person in the chair automatically registers that fact by means of a pointer upon a numbered dial, which is in plain view from without. The purpose aimed at in this device is to enable the proprietor of such chairs to maintain a check upon the attendants to the same and to prevent the misappropriation of a portion of the revenue derived from the occupancy thereof.

To better illustrate our means of attaining this result, reference is made to the accompanying sheet of drawings, in which A represents the chair in its entirety, and $a\,a'\,a''\,a'''$ the four legs thereof.

C C′ and $b\,b'$ are the side rails and arm-rests, respectively, and C″ the back. This back is hinged to the rear legs $a'\,a''$ by means of hinges d, to allow it being folded over the arm-rests when the chair is not in use.

The cushion or seat of the chair comprises a board K′, shown in section in Fig. 2. Upon the upper surface of this board are fastened two or more blade-springs B′ B″, secured to each other at their longitudinal centers by a rivet h. These springs, as clearly shown in Fig. 2, are bowed in shape while in a normal position and are adapted to be flattened and depressed by the introduction of weight upon them—as, for instance, the seating of a person. To allow for the lengthening of these springs when so depressed, they are rigidly attached to the board K′ by means of screws passing through the round holes h'' in one end of the blades and freely fastened by similar screws passing through the slotted openings h' in their opposite ends. It will now be noted that by the removal of the weight by the rising of the person seated in the chair the springs will return back and resume their normal bowed conformation. Over these springs is tightly stretched the covering material, preferably heavy canvas and carpet-bagging B, which is then tacked fast around the edges of the aforementioned board K′. This board and its completed seat or cushion are supported between the side rails C C′ of the chair upon ledges $l\,l'$, fastened to their inner sides. The board K′ has passing through it a vertical opening (shown in dotted lines in Fig. 2) for the reception of an upright pin N. This pin has upon its upper end a head n, which at all times is in contact with the under sides of the blade-springs B′ B″. The lower end of the pin N terminates in a boss O, having a central opening encircling a pivot o, which pivot is fastened to a

lever P. This lever consists of two members P P′, which are joined together by said pivot *o* and further by a cross-bar V at their farther extremities. The lever in its entirety is itself pivoted between two partitions I′ I″, Figs. 2 and 4, by means of the rivet Q. Between the members of this lever is pivoted a spring-dog R upon a pivot *r*, which dog is kept in engagement with a ratchet-wheel H for purposes hereinafter to be described by a blade-spring S, fastened to the rear cross-piece V of the lever members. This cross-piece V has further attached to it a spring-stop T, whose lower or free end is also in engagement with the teeth of the ratchet-wheel H. The member P of the lever has at its end opposite the pivoted extremity a downwardly-depending bracket *p*, to which is attached by a hook W″ a spiral spring W, fastened at its upper end to the upwardly-extending portions *i* of the partitions I′ I″. The two partitions I′ I″ just referred to and two adjacent partitions I I‴ are fastened to a bottom board K, which is screwed to front and back boards *e e′*. This board K and the front and back boards *e e′*, in connection with the seat-board K′, form a receptacle for the reception of the operative mechanism of our device. The ends of this receptacle are closed—one with a hinged door E, which is adapted to be locked, and the other by means of a circular glass D and encircling and retaining ring D′. Adjacent to the glass D is located the partition I‴, which partition has on its outer face the dial D″, with its radial divisions and subdivisions. The partitions I I′ I″ I‴, already referred to, have central openings for the reception of a round shaft H′. This shaft has rigidly affixed to it between the partitions I′ I″ the ratchet-wheel H, before mentioned, and is further provided at one of its outer ends with a pointer E′, operating in conjunction with the dial D″. Toward the opposite end this said shaft has a screw-thread H″, and over this thread is screwed a nut J. This nut J has a pointer *j*, which operates in connection with a scale J′, affixed to the back board *e′*, which scale is provided with equally-spaced divisions. It must now be understood that the ratchet-wheel H possesses the same number of teeth around its periphery as there are divisions and subdivisions on the dial D″ and that the divisions on the scale J′ are so spaced that one complete revolution of the ratchet-wheel H, the shaft H′, and the pointer E′ will have advanced the nut J and the pointer *j* upon the screw-threaded portion of the shaft H′ one division on the scale J′. The nut J, hereinbefore mentioned, is peculiarly constructed, and consists of two half-nuts 1 2. The half-nut 1 has two wings 3 3′ at its upper end and two similar wings 4 4′ at its lower extremity. Between the wings 3 3′ is hinged by means of a pintle 9 the half-nut 2. The wings 4 4′ are slotted at 5 5′, as shown in Fig. 6, for the reception of a cam-lever 6. This lever has a wing 6′, which bears on the inner side of the lower extremity of the half-nut 2. The lower extremities of these half-nuts are closed and held together by a spring 7. The interiors of the two half-nuts are tapped to fit and screw over the threaded portion H″, and by turning the cam-lever 6 one-quarter revolution it will be noticed that by the wing 6′ acting against the half-nut 2 the two are spread apart sufficiently to permit the whole nut J to slip freely over the threaded portion H″ of the shaft H′.

The operation of our device may now be described as follows: The seat B and springs B′ B″ being in the bowed or normal position, with the head *n* of the pin N in contact with their under sides, and assuming that the pointer on the circular dial points at O, as indicated in Fig. 1, and that the nut J and its pointer also indicates O on the scale J′, the prospective occupant seats himself or herself in the chair, thereby depressing the springs B′ B″. These in turn force the pin N downwardly, and that in turn, through the intermedium of the lever P and dog R, advances the ratchet-wheel one tooth, and in this manner the pointer E′ is advanced one subdivision on the dial. Of course so long as the person remains seated in the chair the springs in the seat and the other mechanism remain in a depressed position; but so soon as pressure is removed from the seat the springs B′ B″ return to their normal bowed contour, the lever P and pin N is raised by means of the spring W, and the spring-stop T prevents the backward movement of the ratchet-wheel H. The chair is now in normal position for the next occupant, and upon his being seated the dial-pointer E′ is advanced another space. When the dial-pointer by successive steps has made one complete revolution and again points at O, the nut J and pointer *j* has advanced one notch on the scale J′. When the nut J has traveled its full distance on the shaft H′, by giving one-quarter revolution to the cam-lever before mentioned the halves of the nut are spread apart, when the nut can be slipped back to its point of beginning.

Having thus fully described our invention, we claim as new and desire to secure to us by Letters Patent of the United States—

In a registering-chair, a seat supported upon blade-springs crossing each other at right angles and secured together at their point of intersection, a pin beneath the said springs and normally held in contact therewith, a lever composed of two parallel parts placed a distance apart and connected together at one end, said levers being pivoted or journaled at the connected end and further connected near the opposite end by a pivot engaging the said pin, a downwardly-projecting bracket formed integral with one of the members of said lever, a spiral spring acting upon the end of said bracket, a ratchet-wheel below said two-part lever, a shaft carrying this ratchet-wheel, a dog pivoted between said

members of the lever and acting upon said ratchet-wheel, and suitable mechanism for indicating the successive depressions of the seat-springs, as specified.

In testimony that we claim the foregoing as our invention we have hereunto set our hands, in the presence of two subscribing witnesses, at Buffalo, New York, November 30, 1900.

HENRY SHUART.
ORON BIARD THOMPSON.

Witnesses:
WILLIAM O. STARK,
MICHAEL J. STARK, Jr.