

No. 740,619.

PATENTED OCT. 6, 1903.

H. W. BOLENS.
CHAIR ADJUSTMENT.

APPLICATION FILED MAR. 7, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 2.

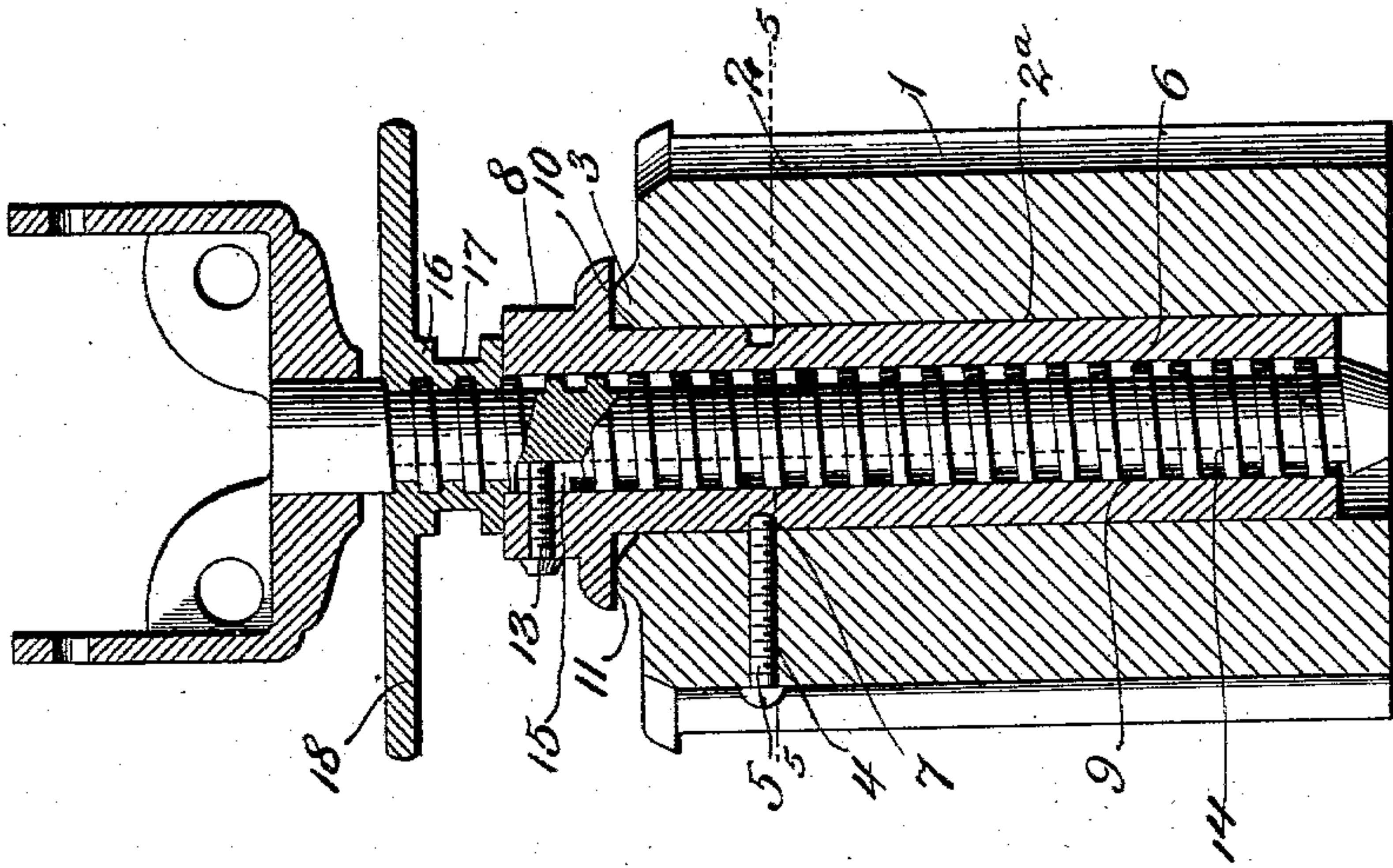
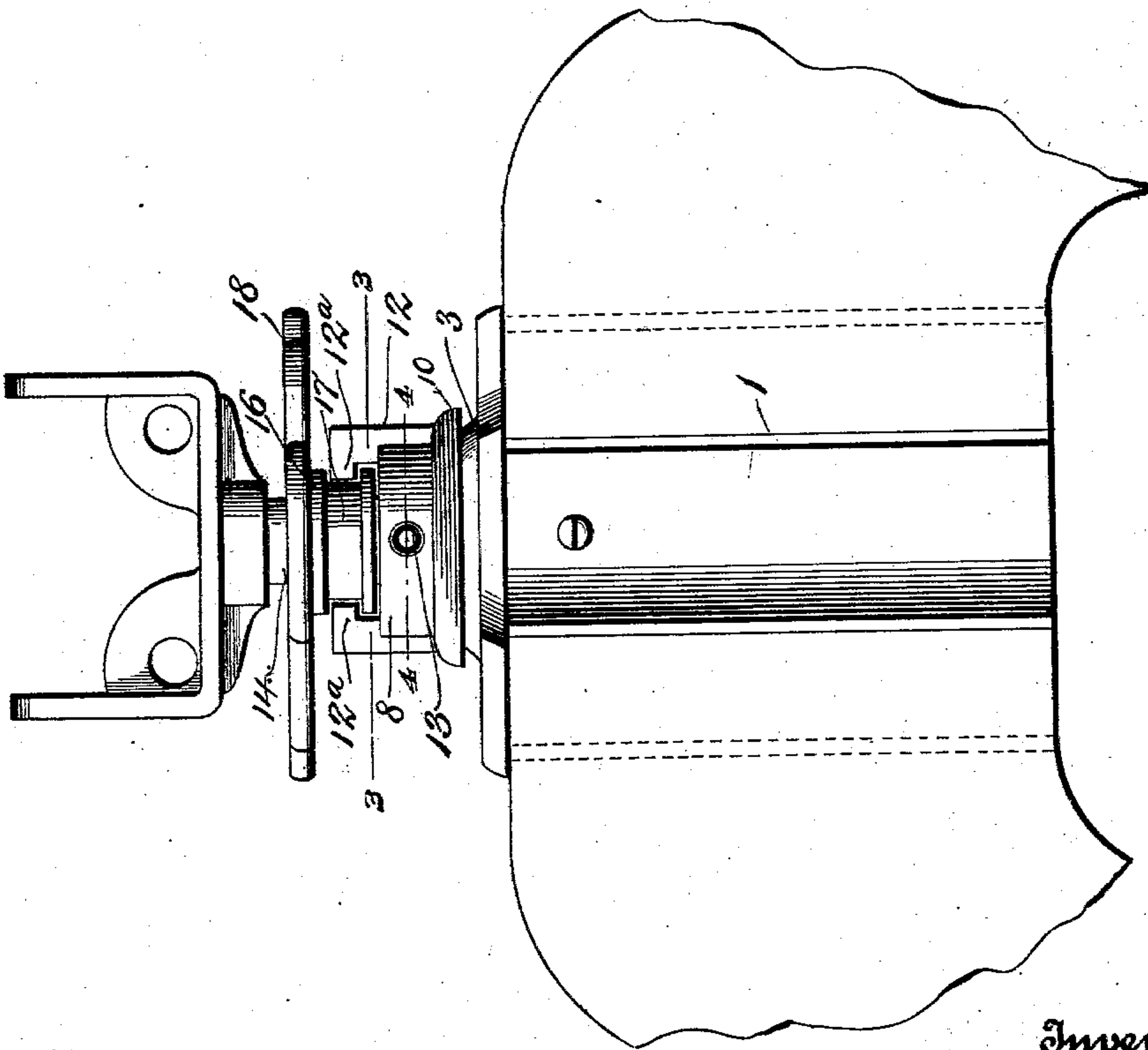


Fig. 1.



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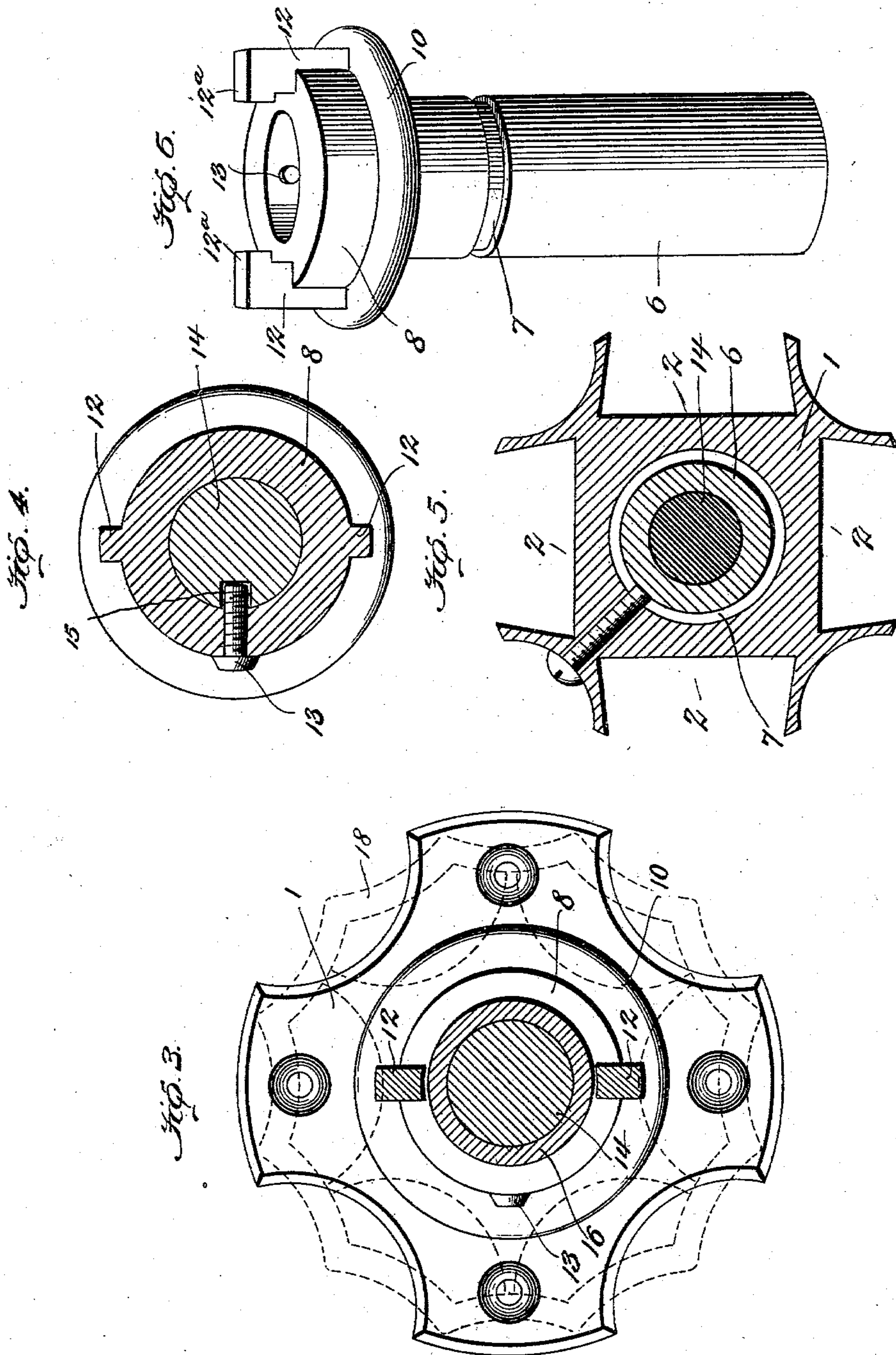
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UNITED STATES PATENT OFFICE.

HARRY W. BOLENS, OF PORT WASHINGTON, WISCONSIN.

CHAIR ADJUSTMENT.

SPECIFICATION forming part of Letters Patent No. 740,619, dated October 6, 1903.

Application filed March 7, 1902. Serial No. 97,059. (No model.)

To all whom it may concern:

Be it known that I, HARRY W. BOLENS, a citizen of the United States, residing at Port Washington, in the county of Ozaukee and State of Wisconsin, have invented new and useful Improvements in Chair Adjustments, of which the following is a specification.

This invention relates to improvements in chair adjustments, the objects being to produce an adjustment whereby the seat may be vertically raised and lowered and freely revolved without disturbing such adjustment, and this, too, independent of any tilting action thereof.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side elevation of a chair adjustment embodying my invention. Fig. 2 is a vertical transverse central section thereof. Fig. 3 is a transverse horizontal section on the line 3 3 of Fig. 1. Fig. 4 is a similar view through the sleeve and post. Fig. 5 is a transverse section on the line 5 5 of Fig. 2. Fig. 6 is a detail perspective view of the sleeve.

Similar reference-numerals refer to similar parts throughout the drawings.

The socket 1 is preferably polygonal externally and formed with the usual recesses 2 for the reception of the chair base or legs, screws being passed downwardly through the upper walls of the recesses and into the legs for securing them in position. The socket is centrally and longitudinally bored, as at 2^a, throughout its length, and the said bore is surrounded at its upper end by an annular superficial bearing-rib 3. The socket, furthermore, may be provided with a radially-disposed threaded aperture 4 for the reception of a retaining-screw 5.

Fitting accurately yet rotatably within the bore of the socket is a cylindrical sleeve 6, the same having formed between its ends an external annular groove 7, coincident with the retaining-screw 5, by which latter, as will be obvious, the sleeve may be held against vertical removal yet free to rotate. The sleeve preferably agrees in length with that of the socket 1 in order to give the former a suitable length of bearing in the latter.

At its upper end, above the socket 1, the sleeve is provided or formed integral with an annular boss 8, also tubular and interiorly forming a continuation of the internal bore 9 of the sleeve. This boss may be flared at its lower end, as at 10, to form a bearing surface or track 11, which may rest either directly on the annular bearing-rib 3, as shown herein, or said rib and track may have their surfaces so formed as to adapt them to receive anti-friction devices—such, for instance, as a series of balls.

At diametrically opposite points there rises from the annular boss 8 a pair of studs 12, having inwardly-disposed lugs 12^a at their upper ends, and between the studs there projects inwardly into the bore of the boss a radial stud 13.

The seat-post or screw 14 is of a diameter adapting it to accurately fit the bore of the sleeve and boss and may be provided throughout its length with a groove or channel 15, that receives the radial pin or stud 13, by means of which latter the said seat-post is prevented from rotation independent of the sleeve, while at the same time it is free to move longitudinally.

Threaded on the seat-post is a hub 16, the same being annularly grooved externally, as at 17, so as to be rotatably mounted between the pair of opposite inverted studs 12, the inwardly-tending ends or lugs 12^a of the said studs engaging the annular groove of the hub. The external diameter of the hub is such as will readily permit its lateral insertion between the studs, and of course when in position and the seat-post or screw extending into the sleeve said hub cannot be removed, yet is capable of revolving.

The hub may be provided with or formed as a part of a small hand-wheel 18, by which said hub may be conveniently rotated.

It will of course be understood that the upper end of the seat-post or screw may be provided with an ordinary securing-plate, by which it may be secured to the chair-seat or to any suitable chair-spider, whereby in the latter instance the chair will be capable of tilting.

The seat-post and its sleeve being locked together by the stud 13, the two are free to rotate together, the hub and its wheel mov-

ing therewith. Hence it will be obvious that the rotations given the chair-seat and its post will not in any way affect or alter the vertical adjustment of the seat. To secure the latter adjustment, it is simply necessary to rotate the hub, in the present instance through the instrumentality of the hand-wheel 18, and the latter being confined against vertical movement will cause the seat-post or screw to be fed vertically, either up or down, in accordance with the direction of rotation of the wheel.

The numerous advantages arising from this construction will at once be obvious in that a chair thus provided may be freely rotated and yet its vertical adjustment remain undisturbed—a most desirable feature—and yet, on the other hand, the seat may be readily vertically adjusted to suit the occupant. Furthermore and finally, this construction may be employed in connection with any of the well-known styles and constructions of chair-spiders.

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

The combination, in a chair adjustment, of a socket annularly bored and provided with a radial aperture, a bored sleeve circumferentially grooved and mounted in the socket, a pair of vertical studs rising from the upper end of the sleeve; and provided with inwardly - disposed lugs, a hub annularly grooved to receive the lugs and freely rotatable therebetween, a seat-post threaded in the nut and extending into the sleeve and provided with a longitudinal groove and pins projecting through the casting into the annular groove of the socket and through the sleeve into the longitudinal groove of the seat-post.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY W. BOLENS.

Witnesses:

ALBERT D. BOLENS,
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