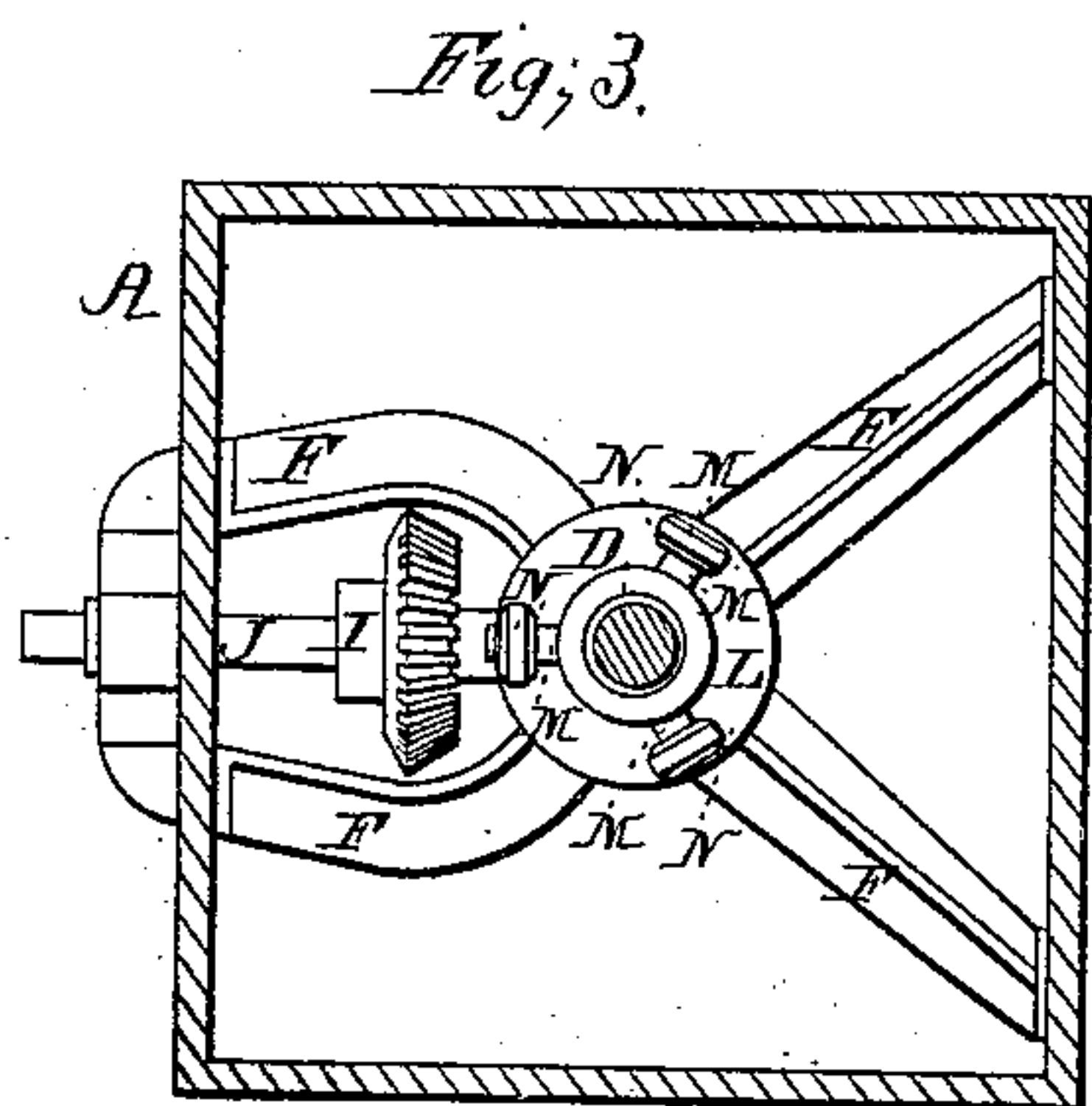
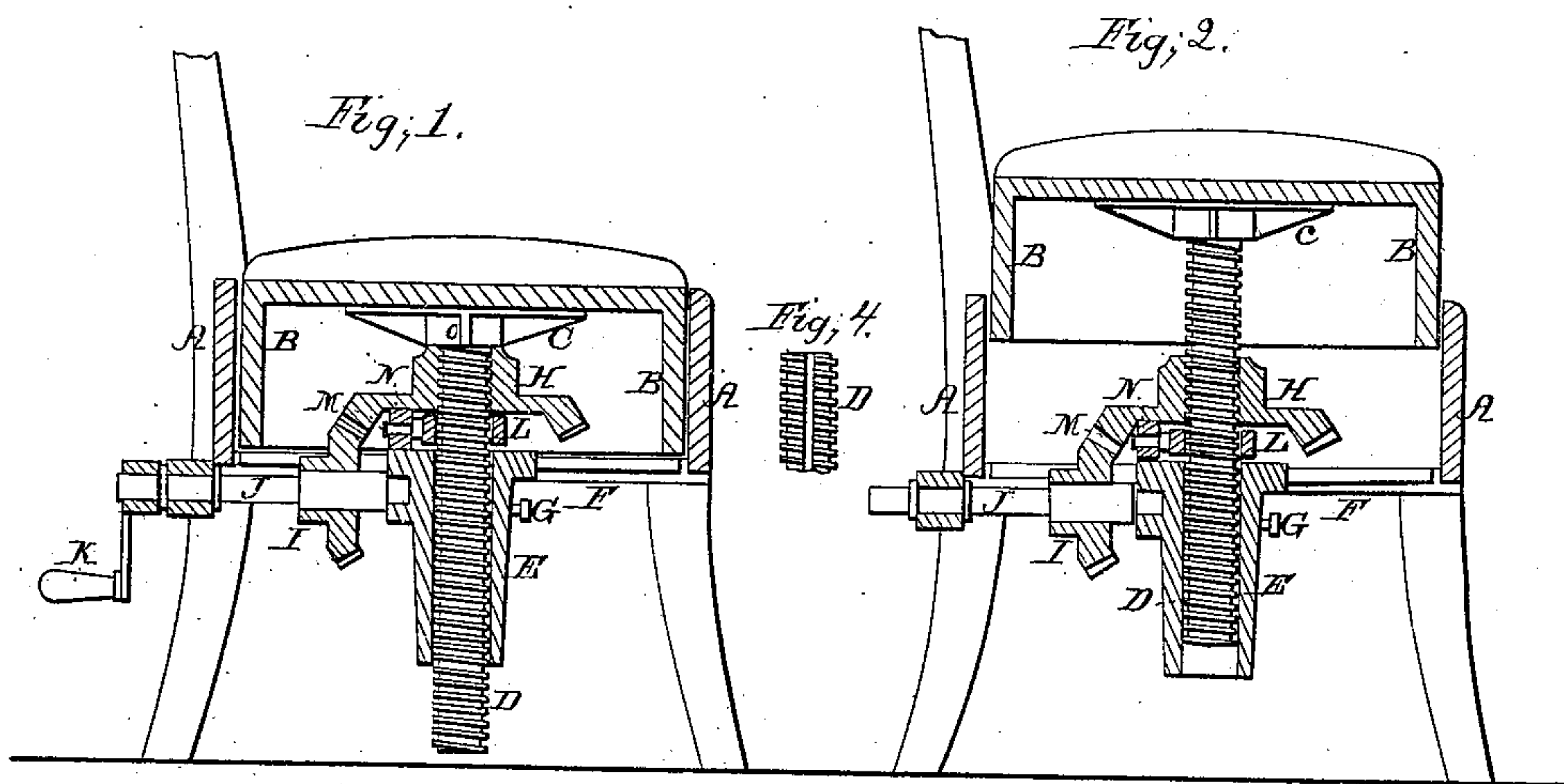


R. A. Stratton, Dentists' Chair

N^o 12,972.

Patented May 29, 1855.



Witnesses;
Henry Howland
Eliot B. B. B.

Inventor;
Richard A. Stratton

UNITED STATES PATENT OFFICE.

RICHARD A. STRATTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CHAIRS FOR DENTISTS' USE.

Specification forming part of Letters Patent No. 12,972, dated May 29, 1855.

To all whom it may concern:

Be it known that I, RICHARD A. STRATTON, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Apparatus for Adjusting the Seats of Dentists' Operating-Chairs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in securing to the under side of that portion of a dentist's operating-chair within which the box-shaped seat is allowed to have a vertical movement a cast-iron bracket having a central projection through which the upright screw for elevating and depressing the seat is allowed to move freely up and down without turning round. The screw is operated by a bevel-wheel whose hub acts as the nut, and gearing into the bevel-wheel is a pinion on a horizontal shaft furnished with a suitable handle. Between the under face of the bevel-wheel and the upper surface of the bracket are friction-rollers which work on pins projecting from a central ring, the said ring fitting loosely on the outside of the thread of the screw. The whole is so arranged that the weight of the seat, as well as the patient thereon, is received by the friction-rollers, which thus serve the double purpose of steadying the seat and allowing it to be adjusted with great facility.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the drawings, Figure 1 is a sectional elevation of part of an operating-chair with my improved apparatus attached and showing the seat depressed to the lowest point. Fig. 2 is the same with the seat raised. Fig. 3 is a ground plan of the above, showing the form of the bracket and arrangement of rollers. Fig. 4 is a detached portion of the upright screw, showing the slot in the same.

The same letters of reference allude to similar parts throughout the several views.

A is the frame of the chair, and B the box shaped seat, which is allowed to move freely therein. Under the top of the seat I secure a metal plate C, which is permanently fastened to the upright screw D. The latter passes through the projection E on the bracket F, the outside of the threads fitting accurately therein, and the screw being prevented from turning by means of the set-screw G, whose point fits into a longitudinal slot cut in the screw D, as seen in Fig. 4.

H is a bevel-wheel, whose hub serves as the nut for the screw D, and into this wheel gears the pinion I on the horizontal shaft J. This shaft has its bearings on the bracket F, and is furnished at the back of the chair with the winch K. In the space between the under face of the bevel-wheel H and the upper face of the bracket F is an annular piece L, which fits freely over the threads of the screw D. From the edge of the annular piece L project three pins M, on which the rollers N are allowed to turn easily.

Without further reference to the construction of the apparatus it will be seen that on turning the handle K in different directions the screw D, which, as before remarked, is prevented from turning by the point of the set-screw G, is raised or lowered, and with it the seat B.

The diminution of friction caused by the use of the intervening friction-rollers, together with the position of the handle at the back of the chair, allows the seat to be adjusted with the greatest facility by the operator.

The peculiar arrangement of the annular piece L, with its projecting pins and rollers, together with the accurate fit of the screw in the projection E of the bracket F, combine to give the seat a uniform steadiness independent of any other guide.

My improved apparatus has the further advantage of having most of the working parts hidden from view, and of being simple and inexpensive in its construction and arrangement.

I do not claim screws and wheels for raising and lowering the seats of chairs, as they are old and well-known applications. Neither

do I claim the use of friction-rollers exclusively; but

I claim—

As a new and simple arrangement for raising and lowering and steadying the seats of operating-chairs, the annular piece L, with its projecting pins and rollers or their equiv-

alents, in combination with the slotted screw D, its nut-wheel H, and bracket F.

RICHARD A. STRATTON

Witnesses:

HENRY HOWSON,
THEOD. BERGNER.